

SEPT. 27, 1954

First Canadian Dome Cars . . . p. 30

# RAILWAY AGE

One of Five Simmons-Boardman Railway Publications

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Six 2400-Horsepower E9's Delivered to Burlington

The Chicago, Burlington & Quincy has a variety of passenger, freight and switching units in its General Motors Diesel fleet. The road gets the best return on its investment because its Operating Department can match motive power to train weights, can always *pick the right locomotive for the job.*

Improved components in its new E9 units last longer, perform better, require less maintenance. These high-speed passenger locomotives ideally meet the demands of single-unit service with increased power from *two* 12-cylinder General Motors Diesel engines *plus* two steam generators for train heating.

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La Grange, Illinois • Home of the Diesel Locomotive • In Canada: GENERAL MOTORS DIESEL LTD., London, Ontario



Quick Handling for Perishables

Harriman Safety Awards Presented

Santa Fe to Begin New Dallas Line at Once

How Competition Endangers the Union

ICC Equalizes All-Commodity Rates

# under 1¢ a Mile

That is the repair parts cost record established by the Fairbanks-Morse 2400-Horsepower Opposed-Piston engines in four years of railroad service. That's the meaning of 40% fewer parts in the O-P.

## How?

**Simple** O-P 2-cycle design eliminates 40% of the moving parts found in comparable diesels. These are parts in other engines that need servicing, adjusting ... they wear and must be replaced.

**Conservative** rating of 200 horsepower per cylinder is the same as the first O-P that entered railroad service more than 10 years ago.

*This is the engine that powers the* **TRAIN MASTER**

It is another reason why TM is your best motive power investment.  
Fairbanks, Morse & Co., 600 South Michigan Avenue, Chicago 5, Illinois



**FAIRBANKS-MORSE**

*a name worth remembering when you want the best*

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## When the snow falls be ready with

This winter keep your switches open this easy, economical way: put Bethlehem's Winter-King Switch Heaters on the job.

The Winter-King is a kerosene-burning heater that fights snow as it falls, preventing freeze-ups, and eliminating costly and laborious manual removal. It costs mighty little to start with, and you can probably save that first cost in one heavy storm. The Winter-King is easy to maintain: one man can handle about 100 if they aren't too widely scattered.

The Winter-King is simple and compact: 18 in. long, 4½ in. wide, and 5½ in. high. Two flanges at the burner end—to protect ties from the flame—add another 2 in. to the overall height. At one end is the combustion chamber, with rock-wool wick in place; at the other end is the fuel opening with a self-closing cap. This arrangement permits refilling without taking the Winter-King out of service or using a special filling can.

Heat can be regulated by means of a sliding cover which increases or decreases the size of the burner-opening. Only in the severest storms need the burner be blazing at full heat. Under average conditions the Winter-King's 1½-gal fuel chamber holds enough for about 15 hours of continuous burning. Four heaters to a side will safely protect a 16½-ft switch.

A Bethlehem man will be glad to tell you all about the Winter-King Switch Heater. If snow and ice give you switch problems, you'll find it well worth while to hear his story.

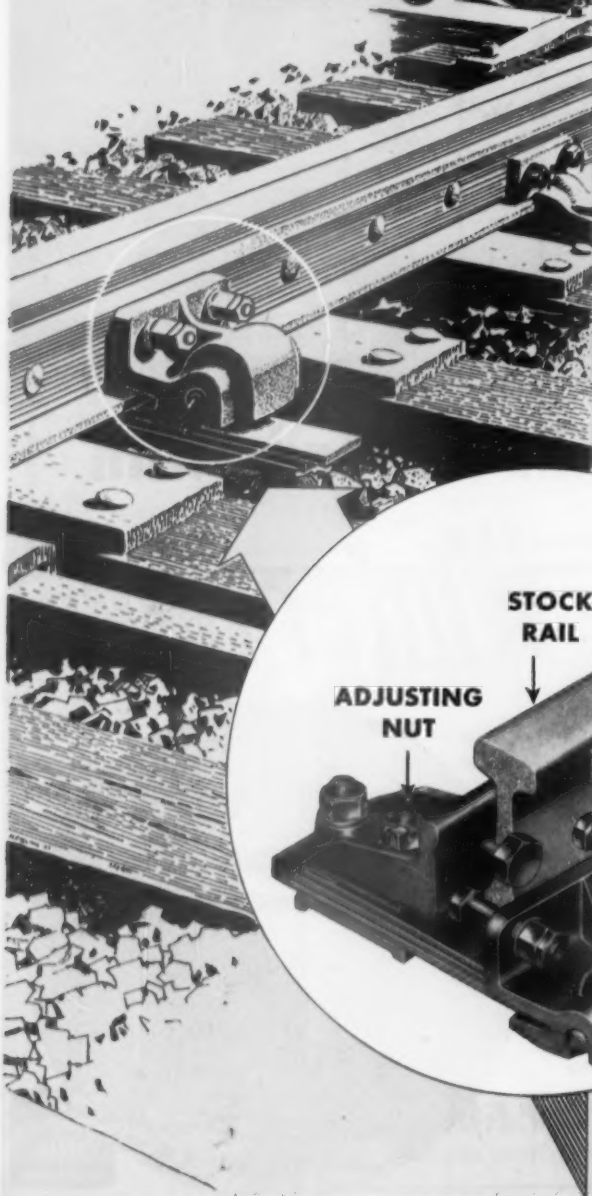
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On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. Export Distributor: Bethlehem Steel Export Corporation

# Winter-Kings



# IMPROVED SWITCH OPERATION with "UNION" Roller Bearings...



## Here's What the Records Show!\*

*\*Factual data supplied upon request.*


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2. Power consumption and operating time for power-operated switches reduced.
3. Less wear of connections and operating mechanism.
4. Spring switch and mechanical facing point lock performance improved.
5. Reduced maintenance costs . . . less cleaning and oiling required.

"Union" Style R Roller Bearings are easy to install and adjust . . . do not interfere with tie tamping. Occasional lubrication is about all the attention they require. Ask any "Union" district office for complete information.

**NEW MOVIE AVAILABLE**  
entitled, "AT THIS MOMENT"—showing a vivid story of modern railroad progress. Length 26 minutes, on 16 mm. color sound film. For use of film write: United World Films, Inc., 1445 Park Ave., New York or Association Films, Inc., 347 Madison Ave., New York.

## UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

SWISSVALE  PENNSYLVANIA

NEW YORK • CHICAGO • ST. LOUIS • SAN FRANCISCO



# RAILWAY AGE

September 27, 1954

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## Week at a Glance

**"Competition by lawsuit"** appears to be becoming a  
regular trucker tactic; Riss & Co. is suing 85 railroads  
and four railroad associations for \$90 million in  
damages. 7

**Two new railroad lines** will soon be under construction.  
One is a 50-mile project by the Santa Fe in Texas; the  
other, a Canadian Pacific 40-miler in Ontario. 8, 12

**Harriman awards**, for outstanding safety performance,  
were presented to their winners on September 16. 16

**FORUM: Competition endangers unions**, and exces-  
sive demands on the railroads under today's competi-  
tive conditions are more likely to hurt than to help  
union members. 29

**New dome cars for Canada**—The Dominion's first—are  
now going into service on Canadian Pacific transconti-  
nental trains. 30

**Utilization of diesel power**—and how two more roads  
handle it—is again the subject of the questions and  
answers page. 38

**Faster service for perishables** is provided by a new \$4-  
million yard just put into service by the Union Pacific  
at Kansas City. 43

## BRIEFS

**"Motor trucks last year** collected 81% of the money  
paid out by shippers to move intrastate freight and  
express in California. Railroads received only 18% of  
total and water carriers a little over 1/2%. Gross intra-  
state traffic operating revenues of all classes of for-hire  
carriers last year amounted to \$539 million. Of that  
total, the for-hire truckers received \$438 million."

# AIR COSTS MONEY!

## Stop leakage with new

## WABCOSEAL<sup>®</sup> Angle Cocks

**B**RAKE pipe leakage increases compressor operation, lowers its efficiency and causes difficult train handling. Reduce leakage to the minimum by installing the new Wabco Seal Angle Cock shown here. Two styles are available—with or without spring-locking handle.

Heart of the new Wabco Seal Angle Cocks is the sealed key that stays tight through a wide degree of key wear. A Wabco compression ring replaces the standard tapped thread at the brake pipe end to give a positive seal. Also, adequate end tolerance is provided so brake pipe nipple need not be cut to precise length.

The passenger car and locomotive angle cock has a spring loaded handle that snaps the socket into locked position when handle is fully open or closed and keeps it there despite vibration and shock.

The sealed key and spring locking handle are available separately for application to present angle cocks.

## Westinghouse Air Brake COMPANY

AIR BRAKE DIVISION

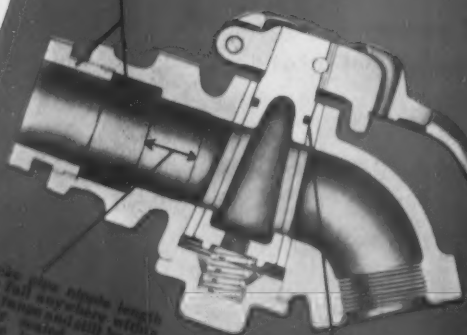


WILMERTON, PA.



When compression ring grips pipe when nut is tightened in clamping action.

**FOR FREIGHT CARS:**

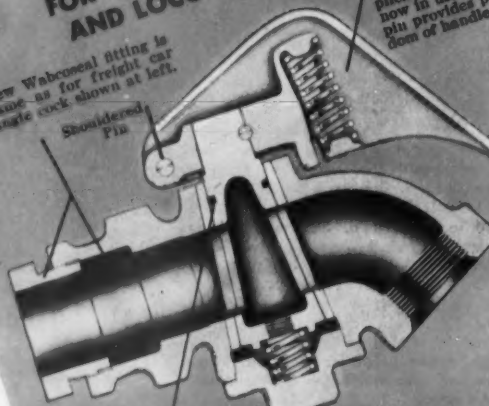


Sealed key extends length of full structure within fully sealed. Threaded nipple is not necessary component.

"U" ring seals the key effectively through a wide degree of key wear. This seal can be obtained on old angle cocks by properly removing the latching and inserting new key.

**FOR PASSENGER CARS  
AND LOCOMOTIVES:**

New Wabco Seal fitting is same as for freight car angle cock shown at left.



Strong spring is compressed when handle is snapped raised. Socket is snapped into locking position when handle is fully opened or closed. Available for application to angle cocks now in use. A shouldered pin provides proper freedom of handle movement.

Sealed key is identical to freight car angle cock key shown at left.

**NEW MOVIE AVAILABLE** entitled, "AT THIS MOMENT"—showing a vivid story of modern railroad progress. Length 26 minutes, on 16 mm. color sound film. For use of film write: United World Films, Inc., 1445 Park Ave., New York or Association Films, Inc., 347 Madison Ave., New York.

## Current Statistics

Operating revenues, seven months	
1954 .....	\$ 5,389,093,368
1953 .....	6,253,221,966
Operating expenses, seven months	
1954 .....	\$ 4,316,285,150
1953 .....	4,724,355,127
Taxes, seven months	
1954 .....	\$ 509,494,449
1953 .....	749,901,499
Net railway operating income, seven months	
1954 .....	\$ 416,325,817
1953 .....	643,223,357
Net income, estimated, seven months	
1954 .....	\$ 272,000,000
1953 .....	490,000,000
Average price railroad stocks	
September 21, 1954 .....	70.15
September 22, 1953 .....	58.07
Carloadings, revenue freight	
Thirty-seven weeks, 1954 ....	23,609,729
Thirty-seven weeks, 1953 ....	27,422,838
Average daily freight car surplus	
Week ended Sept. 18, 1954 .....	72,703
Week ended Sept. 19, 1953 .....	9,741
Average daily freight car shortage	
Week ended Sept. 18, 1954 .....	1,163
Week ended Sept. 19, 1953 .....	3,557
Freight cars delivered	
August 1954 .....	2,297
August 1953 .....	5,557
Freight cars on order	
September 1, 1954 .....	13,013
September 1, 1953 .....	45,735
Freight cars held for repairs	
July 1, 1954 .....	120,104
July 1, 1953 .....	95,768
Average number of railroad employees	
Mid-August 1954 .....	1,070,471
Mid-August 1953 .....	1,236,702

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## Week at a Glance CONTINUED

*Verne Scoggins, member of the California Public Utilities Commission, before the Commonwealth Club of California, September 10.*

Date for argument of the 17 so-called "reparations cases" has been postponed from October 6 to November 29. Division 4 of the ICC set the new date in response to a government request to hold off on them until "after January 15." Presentation time was also limited to 9 hours for each side, though U. S. legal staff said it would need 21 to point up its protest against freight rates paid by the government in World War II.

Complaints that Canadian railroads, by means of "agreed charges," have been denying Prairie provinces a share in the benefits of low transcontinental freight rates between eastern Canada and the Pacific coast have led to an inquiry by a federal commission. The inquiry will open next month in western Canada.

"Congress needs to be asked one simple word: *Why?* Why are airlines carrying 3-cent mail when last year the post office had a loss of more than \$29 million in handling air mail at 6-cents? Why is the risk of destroying railway mail service being taken, when surface carriers last year gave the post office a profit of \$39 million? Why is the post office, which operates at a large deficit, doing the very thing which will make its deficit even greater? And a lot of other 'whys?'"—*Wayne A. Johnston, president, Illinois Central.*

"Free enterprise in American transportation" is how the Monon described its new Hammond, Ind., freight-house in a full-page newspaper advertisement inviting Hammond citizens to an "open house" at the new facility. "We didn't build it," says the ad, "by matching 5 cents of our money with 5 cents we took by waving a pretty picture of a four-lane highway and then sneaking the money out of your pocket while we babbled something that you think sounded like 'taxes'."

# Body by Budd + **INSULATION BY G-B** = Comfort for Canadian Pacific Passengers



Once again, ULTRALITE long glass fiber insulation has been chosen to protect passengers from heat, cold and sound in ultra-modern passenger train

cars. This time it's the 173 streamlined, all stainless steel cars

being built by Budd for the Canadian Pacific Railway.

Ultralite will protect passenger comfort for untold

years because it is the insulation that won't

sag, settle, rot or disintegrate under miles of service.

That is why railroads and car builders specify Ultralite when nothing but

the best will do—in passenger, refrigerator and tank cars.



**GUSTIN-BACON MANUFACTURING CO.**

210 W. 10th St. Kansas City, Mo.



# Riss Sues Roads for \$90 Million

Trucker charges 85 roads, 4 associations conspire to "destroy" him

Eighty-five major railroads and four key rail associations were named in a \$90 million damage suit last week by a trucker who charged them with an organized campaign to ruin his business.

Robert B. Riss, twenty-seven-year-old president of Riss & Co., told a press conference at which news of the suit was released that the railroads' "objective . . . is to destroy us as a symbol of the industry."

The suit, seeking to recover treble damages for an alleged loss of \$30 million, was filed in federal district court at Washington under sections 1 and 2 of the Sherman Anti-Trust Act. It also seeks injunctions against the defendants to restrain them from continuing the alleged practices.

**The Defendants**—Mr. Riss said he did not know of any major railroad that is not accused of taking part in the "conspiracy," although he admitted his list had not been "checked" against the file of Class I roads. The associations named are the Association of American Railroads, the Association of Western Railroads, the Traffic Executive Association—Eastern Railroads, and the Eastern Railroad Presidents Conference. Also named is the public relations firm of Carl Byoir & Associates, accused of acting as an agent for the presidents conference and for an employee of the Pennsylvania.

Mr. Riss, accompanied by his father, Richard R. Riss, chairman of the board, accused the railroads and the other defendants of carrying on a campaign of "pure persecution" which he

said was "instigated" in proceedings before the Interstate Commerce Commission starting in 1951. The proceeding involved Riss' application for authority to transport explosives in 34 states and the District of Columbia. Sixty different truck companies originally filed for the authority and were opposed by railroads and various public authorities and private organizations.

Subsequently, he charged, the railroads and other defendants conspired to have the Public Utilities Commission of Ohio bring a separate action against Riss before the ICC seeking to bar its trucks from Ohio roads, citing a record of safety and traffic violations.

He said the railroads apparently chose Ohio because of "the political climate" there with Governor Lausche

being opposed to the truckers and also because of the importance of Ohio as a "bridge state" for Riss routes east and west.

**Admits Violations**—He admitted that "several" of the violations charged were "very bad" and also recalled that Riss had been involved in two instances of munitions exploding aboard its trucks. The company's general safety record, he insisted, however, was good.

The complaint, filed by the Washington law firm of Layne & Ephraim, alleges five categories of unlawful activities by the defendants who are charged individually and collectively. The charges include:

"Solicitation" of public officials to have Riss' operating authority revoked, including instigation of the Ohio PUC action; attempts to have regulations adopted to "render motor carrier operations impractical and economically unfeasible" including weight restrictions; institution of campaigns for "unusual enforcement" of regulations such as having Ohio investigators trail Riss trucks; "abuse of the privilege of intervention" before the ICC and use of ICC hearings "as a vehicle for conducting a scurrilous, vicious and false campaign" against the company; and "institution of . . . unfair competitive practices" against Riss.

Mr. Riss said his company was bringing the suit "reluctantly" because of the "tremendous" railroad resources it will encounter but insisted no other truck company or association is or expects to aid in the suit. "We are not," he said, "ready to submit to a campaign of prosecution by the American railroads."



**FOREIGN RAILROADERS** greet the crew of an American train. The train, a special provided by the Pennsylvania for delegates to recent meetings of the International Electrotechnical Commission at the University of Pennsylvania, waits while Stanley B. Warder, chief officer, British Transport Commission, shakes hands with Fireman E. R. McCarthy. Looking on are L. A. M. Ginger of the London Transport Executive; General Pierre O. Salmon, French commissioner of standardization; and David W. Wells, executive of the British Railways.

## FARICY, MACKIE, CALL CHARGES FALSE

William T. Faricy, president of the Association of American Railroads, said "the charges by the Riss Company are utterly without foundation, and will be so demonstrated if the case ever comes to trial."

David I. Mackie, chairman of the Eastern Railroad Presidents Conference, declared that "the allegations with respect to the conference in the complaint . . . will be proved to be wholly unfounded if the plaintiff ever brings the matter to trial."

Gerry Swinehart, president of the Byoir firm, described the move as "more of the truckers same old technique of competition by law suit."

## Rates & Fares

### Canadian Roads Cut Montreal-Toronto Rates

The Canadian Pacific and Canadian National have filed new rates, effective September 20, making substantial cuts in tariffs between Montreal and Toronto. The new freight rates, applicable to certain commodities moving between the two cities in box cars and railroad-operated trailers-on-flat-cars, apply to all shipments between 5,000 lb and 15,000 lb in trailers, certain specified commodities in loads of 20,000 lb to 24,000 lb in trailers, and to certain commodities in shipments of 20,000 lb to 60,000 lb moving in box cars.

CPR President W. A. Mather and CNR President Donald Gordon issued

the following joint statement on the new rates:

"We have been concerned for some time about the small percentage of traffic moving by rail in the important Toronto-Montreal industrial area. An intensive study recently completed by both railways shows that, while we have ample capacity in this area to handle much greater tonnage, our share of the high-valued traffic has substantially decreased in the past few years. In the light of this situation, a basis of freight rates has been worked out to attract as much as possible of available traffic between these points.

"Our analysis convinces us the rate reductions we are making should be attractive to shippers and result in an improvement in our revenues because of the additional traffic we expect to obtain."

### **DL&W Asks ICC to Reconsider Fare Increase**

The Lackawanna has asked the full Interstate Commerce Commission to reconsider, and grant oral argument on, what the railroad terms "the apparent

arbitrary action" of the commission's Division 2 in suspending an unprotested increase in commutation fares between DL&W stations in New Jersey and New York City.

The proposed increase, applying to all types of commuter tickets, ranges from 5.9 to 14 per cent, with an overall weighted average, based on traffic, of 10.4 per cent. The request for it was originally filed August 13; and the September 14 suspension (I&S Docket No. 6260) was issued in spite of the fact that no protests to the increase were filed. In its request for reconsideration, the Lackawanna alleges that the suspension order set forth "No substantial reason" for Division 2's action.

Meantime, the ICC, on its own motion, has instituted a general investigation (Docket No. 31621) of New Jersey-New York commuter fares on the Central of New Jersey; Erie; Lackawanna; Lehigh Valley; New Jersey & New York; New York Central (West Shore); and Pennsylvania.

## **East's All-Freight Rates Equalized**

**ICC orders truckers to maintain railroad level as minimum basis—Condemns "streamlined" version of railroad mixing rule**

All-commodity rates published by railroads and motor carriers operating in eastern territory, and used principally by freight forwarders, have been ordered on a parity basis by the Interstate Commerce Commission.

The orders came from the commission's Division 2—one being a minimum-rate order requiring truckers to raise their all-commodity rates, and the other an order requiring railroads to abandon the "streamlined" version of Rule 10, which permits use of that mixing rule in combination with all-commodity rates, i.e., it provides that commodities rated lower than the all-commodity basis may be included in a mixed carload taking the all-commodity rate and charged for at the lower rate.

**Lengthy reports** accompanied both orders. The railroad case (No. 31006) arose out of a March 10, 1952, complaint wherein the Eastern Central Motor Carriers Association, tariff publishing agent for truckers, assailed railroad all-commodity rates. The truck case (No. MC-C-1331) was an investigation instituted by Division 2 on September 27, 1951, and subsequently expanded by seven supplemental orders.

Railroad all-commodity rates under attack were those applicable between points in Central territory, on the one hand, and in Trunk Line and New England territories, on the other. Division 2's general finding was that these rates are not unlawful.

**The knockout blow** for the "streamlined" version of Rule 10 came in the next finding, which condemned as "unjust and unreasonable" any tariff rule which authorizes inclusion in an "all-commodity" carload of any freight "at rates or charges lower than all-commodity rates."

Commissioner Freas, in a brief dissenting-in-part expression, said he was unable to see "why, if Rule 10 is proper in itself and if all-freight rates are on a proper basis, the two are not proper when used in combination."

**In the truck case**, the division's general finding was that all-commodity rates of truckers to and from points in Central, Trunk Line, New England and Western Trunk Line territories "constitute destructive competition, in violation of the national transportation policy." The finding as to "reasonable minimum" rates for the future was that they shall be rates not less than 45% of truckload first-class rates—or not less than "rail rates, minimum 30,000 lb., on all commodities. . . ."

Evidence in the railroad case indicated that, at the time of the hearing, the railroad all-commodity rates were on a general level of approximately 45% of railroad first-class rates. Use of the "streamlined" version of Rule 10 had the effect of putting some "all-commodity" shipments on a lower basis.

**Efforts to hold traffic** of forwarders, in competition with truckers, were mainly responsible for the drop from

the original all-commodity-rate level of about 70% of first class. Of this railroad determination to check diversions of forwarder business, Division 2's report had this to say:

"Defendants [the railroads] stress the fact that freight forwarders commenced their operations by using rail transportation and continued to grow by use of that method of transportation. Many in the railroad industry definitely believe that through forwarder operations railroads retain transportation of LCL freight which would otherwise be diverted to motor carriers.

"Hence, the railroads feel that it is essential to maintain all-commodity rates on bases competitive with motor-carrier rates. From and to virtually all points in Official territory motor all-commodity rates are maintained which are substantially lower than rail rates here under consideration."

**Truck Rates**—In its report in the truck case, the division said the all-commodity rates of "general commodity" truckers averaged about 38% of railroad first-class rates. It added that still lower rates have been maintained by so-called "captive" truckers—those with operating certificates restricting them to handling forwarder shipments.

This report also noted that many of the motor rates in issue were published in tariffs designed to leave the cost of trucking service to forwarders on the same basis that it had been under forwarder-trucker "joint rate and division" arrangements that were condemned by the September 20, 1951, amendment to the Interstate Commerce Act's section 409. The division suggested that truckers who adopted that approach apparently considered it "the easiest method of compliance" with the legislation.

## **New Facilities**

### **Santa Fe to Start New Dallas Line "At Once"**

With receipt of an Interstate Commerce Commission certificate authorizing construction of its new line into Dallas, Tex., the Santa Fe plans to start work on the \$6.5-million project immediately.

J. P. Cowley, vice-president and general manager of the Gulf, Colorado & Santa Fe, at Galveston, has been named to handle all real estate transactions in connection with the right of way and will shortly open an office in Dallas.

The road has agreed to conditions of the ICC's August 4 order, that the line be built through Denton instead of on a line east of Lake Dallas, as originally projected (*Railway Age*, September 6, page 57). The accepted route will be from a point near Sanger (on the present main line serving Fort Worth) to a junction with the present Paris line of the Santa Fe between (Continued on page 12)

# Congratulations...

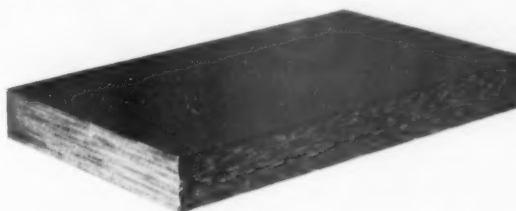
TO THE CANADIAN PACIFIC RAILWAY COMPANY

on its 173 new cars built by The Budd Company

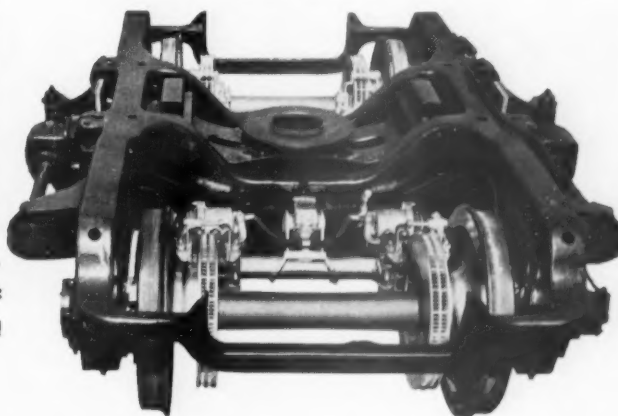
**The Fabreeka applications  
in each of these cars are as follows:**

- ▶ 8 Top Equalizer Coil Spring Pads  
9½" dia. x 1½" thick
- ▶ 8 Bottom Equalizer Coil Spring Pads  
9½" dia. x 1½" thick
- ▶ 8 Top Bolster Coil Spring Pads  
10" dia. x 1½" thick
- ▶ 8 Bottom Bolster Coil Spring Pads  
10" dia. x 1½" thick
- ▶ 4 Swing Hanger Bearing Pads  
22⅝" x 4¾" x 1⅝" thick
- ▶ 4 Bolster End Stop Pads  
10" x 4½" x 1" thick
- ▶ 8 Journal Box Pads  
7⅛" x 7⅛" x ½" thick
- ▶ 4 Coupler Carrier Pads  
3½" x 2⅝" x ½" thick
- ▶ 4 Bumper Pads—Radial Stop  
12½" x 8" x ⅞" thick
- ▶ 2 Upper Buffer Spring Guide Pads  
3" x 2¾" x ¾" thick
- ▶ 4 Side Stem Bumper Pads  
3¼" o.d. x 1½" i.d. x 1½" thick

We are proud that Fabreeka is a part of these magnificent new cars as it has been on cars built for the Canadian Pacific Railway since 1936.



Commonwealth truck used in 173 Canadian Pacific Cars. Twenty-four Fabreeka units are installed in each truck.



Fabreeka was selected because of its ability — proven by 20 years of service on the railroads — to:

- Increase passenger comfort by absorbing transmitted noise and vibration.
- Reduce mechanical wear and maintenance.
- Withstand the service encountered.

Write for New Engineering Catalog devoted to the Railroad Applications of Fabreeka

## FABREEKA

**PRODUCTS COMPANY, Inc.**

222Y Summer Street, Boston 10, Massachusetts

NEW YORK • CHICAGO • DETROIT • SPARTANBURG • PHILADELPHIA • PITTSBURGH • OAKLAND

Canadian Representative: INTERNATIONAL EQUIPMENT COMPANY, MONTREAL

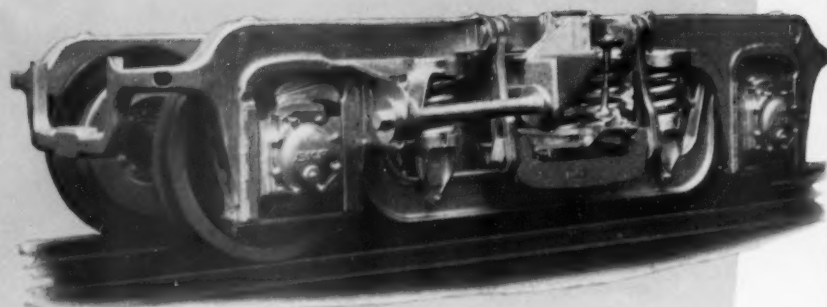


# **Smoother, Swifter, The New Luxury Streamliner Santa Fe's New San Francisco Chief...**



**All Cars Equipped with New Commonwealth  
Outside Swing Hanger Type**

**Trucks  
and New  
Central Bearings**



More and more passengers are enjoying the increased comforts of overland rail travel. More and more passenger cars on the Santa Fe are being equipped with new type trucks for faster, smoother riding and lowest up-keep cost.

Commonwealth Trucks with outside spring suspension assure better,

smoother riding at all speeds with less car body roll. Inspection and maintenance are simplified. The Central Bearings eliminate truck shimmy and side bearings and give greater mileage between wheel turnings.

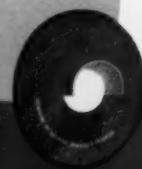
For better performance and operating economy, consider this improvement program for your passenger equipment.



**GENERAL STEEL CASTINGS**

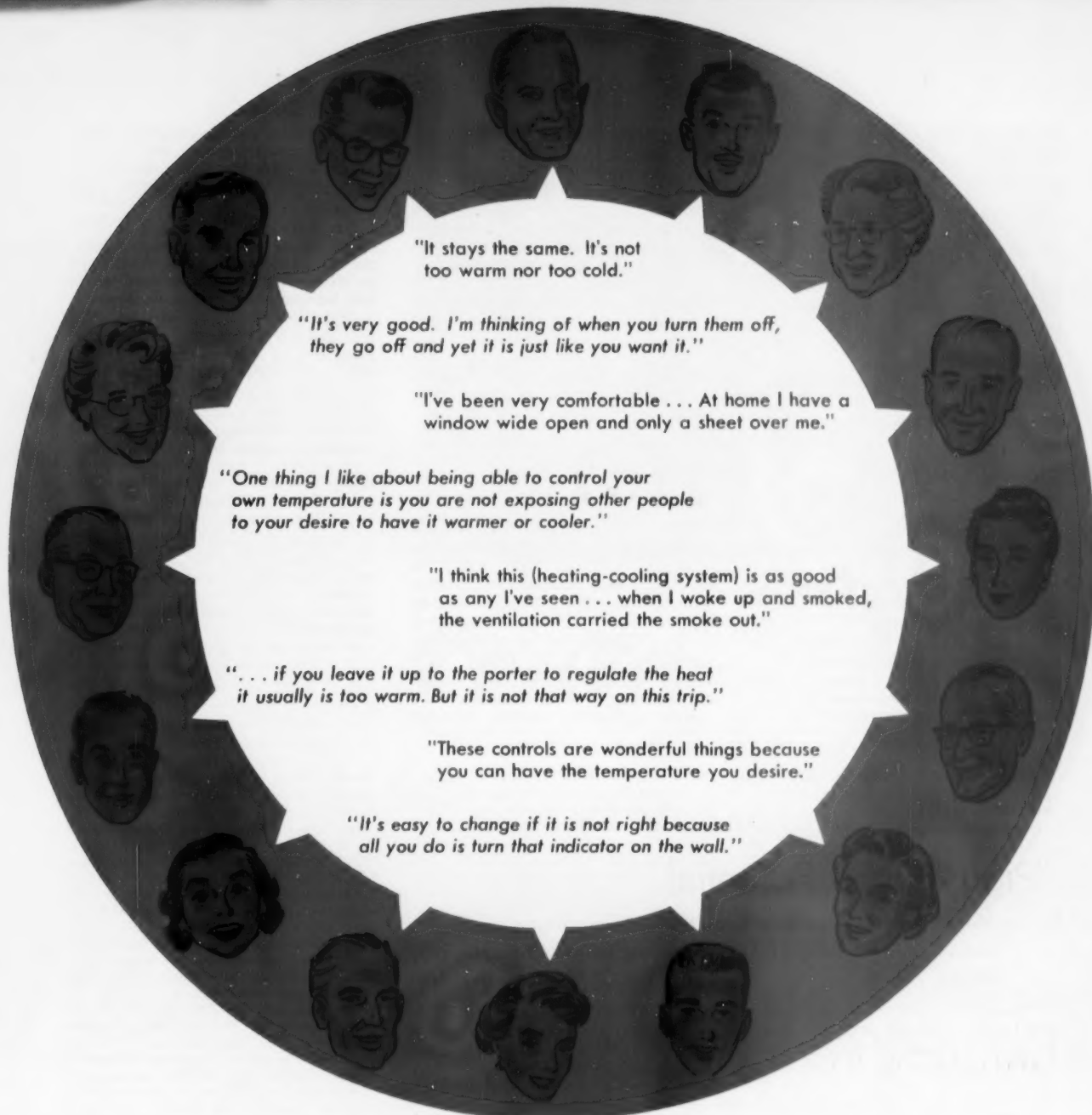
Granite City, Ill.

Eddystone, Pa.



- ✓ Ship by Rail
- ✓ Insured by Rail





## Are You Listening? ...

These are actual comments made to professional interviewers by room-car passengers in cars with modern Vapor Moduzone Heating. It's no wonder that railroads specify fully-controllable Moduzone Systems universally for both new room-cars and heating conversions.

Vapor had no part, whatever, in this recent survey except to graciously accept the results: credit for giving passengers what they want—individual room-heat control from full-on to full-off . . . for giving railroads Moduzone—the comfortable, simple, dependable room-car heating system.

**THE VAPOR MODUZONE SYSTEM IS UNRIVALED FOR LOW FIRST COST AND TIME-SAVING MAINTENANCE**

**ONLY FULLY-SELECTIVE VAPOR MODUZONE HEATING GIVES EACH ROOM-CAR PASSENGER INDIVIDUAL TEMPERATURE CONTROL**

**VAPOR HEATING CORPORATION**

**80 EAST JACKSON BLVD., CHICAGO 4, ILLINOIS**

**NEW YORK • ST. PAUL • DENVER • ST. LOUIS • ATLANTA • WASHINGTON • PHILADELPHIA • SAN FRANCISCO • HOUSTON • RICHMOND • MONTREAL • LOS ANGELES**

(Continued from page 3)

Reinhardt and Garland. The line will provide the Santa Fe with a direct route into Dallas from the north, obviating the need for the present circuitous route through Fort Worth and Cleburne.

## UP Construction Projects Total \$2.4 Million

Current construction projects on the Union Pacific total in excess of \$2,390,000.

The largest is a main-line relocation at Denver, which includes installation of centralized traffic control, at a total cost of \$810,330. At Kansas City, Kan., a warehouse building, 160 ft by 200 ft, is being built at a cost of \$276,500. New speed control and automatic switch control equipment is being installed in the North Platte (Neb.) yard, at a cost of \$391,430. Other projects include a gas line to the Council Bluffs, Iowa, powerhouse (\$211,000); a track scale at Cozad, Neb. (\$56,680); a 160-ft extension to the Laramie, Wyo., timber treating plant retort (\$148,680); a remote controlled interlocking plant at Denver (\$98,270), and ad-

ditional yard trackage at Lawrence, Kan. (\$38,100).

A new 10,000-bbl fuel storage tank being erected at Ogden, Utah, will cost \$115,690; a new water treatment plant is being built at Salt Lake City, at a cost of \$38,600, while additional trackage in the Los Angeles metropolitan area involves expenditure of \$25,440. A one-story frame freight house, 26 ft by 86 ft, is being erected at Wilmington, Cal., at a cost of \$62,930. Work on the Huntington, Ore., enginehouse and engine facilities totals \$116,420, and includes installation of two automatic oil-fired steam generators.

## CPR Begins New 40-Mile Branch

The Canadian Pacific has awarded a contract to the Caswell Construction Company, Kirkland Lake, Ont., for grading a new 40-mile branch from Struthers, on the CPR main line 33 miles west of White River, Ont., north to Geco. Construction is to begin immediately, said N. R. Crump, CPR vice-president. The new branch will provide access to recent mineral discoveries and other natural resources.

## Operations

### "Piggyback's Potential"

Motor common carriers have the traffic volume needed to make T-O-F-C successful, E. F. Ryan tells T-M-K Shippers Board

"Among all motor carriers operating between Chicago and New York, there exists enough volume for a trainload of trailers a day in each direc-

tion," Eugene F. Ryan, president of the Rail-Trailer Company, recently said to the Trans-Missouri-Kansas Shippers Board. (His prepared talk was deliv-

ered by Charles B. Cunningham, director of motor carrier sales for Mr. Ryan's firm, when Mr. Ryan was delayed because his scheduled airliner was grounded en route.)

Mr. Ryan predicted that piggyback operations as now conducted by a number of carriers between Midwestern points and the Eastern seaboard would not be successful, because they are "simply duplicating an existing service" and not offering the shipper anything new. A railroad, he said, might solicit for trailer-on-flat-car business the trailers of private carriers; those of motor common carriers; or traffic of shippers in railroad-owned trailers. His company has cast its lot in the field of common carrier haulage "for one good, solid, undeniable reason. The motor carrier has the volume."

[Mr. Ryan has previously pointed out to *Railway Age* readers (May 10, page 25) that private carrier movement over highways is relatively small in volume; is seldom between "key" points; involves nearly 50% empty trailer movement; that vehicle ownership per company is generally very low; and that few such operators have made use of piggyback service when it was available to them. His comments to the board on private carrier piggybacking, therefore, have not been repeated here.

—EDITOR]

"The Pennsylvania and other eastern roads," Mr. Ryan said, "have published tariffs naming rates on commodities, and class rates, applicable on freight loaded in or on trailers and moving on flat cars. The railroad furnishes the trailer, loads and unloads it, both at shipper's dock and at railhead. All this is done at rates the same as published by competitive intercity motor common carriers. . . . The railroad is simply duplicating an existing service and not offering the shipper anything he did not have through the motor common carrier industry."

**Problems**—"The plan creates a number of problems. It establishes a parallel and conflicting rate structure in which rates are sometimes lower and sometimes higher than existing rail box car rates. It involves the railroad in an investment for trailers, tractors and special equipment on flat cars to haul an undetermined amount of traffic. It leaves the railroad open to charges of discrimination by shippers in cities where facilities are not available."

"Where can the railroad solicit traffic? It can go to those now using box cars, but the alternatives there are not helpful. Either that shipper has already refused to move in trailerloads, when his traffic was solicited by motor carrier, or he accepts the offer to use the railroad trailer and transfers his business from box car to flat car. More often than not, this will involve a loss in revenue to the railroad. The railroad can solicit from private carriers, but they have already made their choice when they invested in their own equipment. If they had wished for rates and service available from trailerload movement, they could have gotten them from motor carriers."

"This leaves only those shippers now moving by motor common carrier. But here the solicitor runs into trouble. What has he to offer? The motor carrier rate and minimum weight? The shipper already



**TRUCKING HEAD END TRAFFIC** has enabled the Duluth, South Shore & Atlantic to reduce operation of its Duluth-Marquette (Mich.) passenger train to a tri-weekly service basis. The truck handles mail, express and other head-end traffic on a schedule approximately the same as the pas-

senger train it has replaced, and makes all the same interchange connections. The highway equipment, consisting of a G.M.C. (General Motors) diesel truck tractor and a 34-ft Trailmobile trailer, is painted in a color scheme similar to that of the road's diesel locomotives.

has these from the motor carrier. Service? There is the stumbling block. Service in trailer-on-flat-car operations depends on fast through trains. But fast through trains cannot be run without a heavy volume of movement. The best that eastern roads have been able to offer has been a sometimes equal service. If a trailer coming from a shipper's dock misses the train, it is held over until the next night. On the other hand, a motor carrier could start that trailer on its way over the road no matter what time loading might be completed.

**Sees Failure**—It is instructive to look at the record. The first trailers handled by eastern roads moved July 14. In the first five weeks, total movement over all nine routes, among all six railroads, was 107 trailers. This is not enough to make up one good trainload.

"I will make a prediction that most of these 'experiments' in all-rail trailer-on-flat-car service will fail, as in the past, for the simple reason that there is neither need nor demand for that type of service. Without volume to warrant special trains, service will be second-rate. Traffic moving by highway today will, in the main, continue to move by highway.

"There remains one more possibility in all-rail service. Railroads may attempt to attract traffic by cutting rates below motor carrier levels. This is not only a dangerous approach but it defeats the very purpose of trailer-on-flat-car operations. Its effect on all-rail rates would certainly be to cause erosion in the rate structure. For example, the newly published trailerload rates between Chicago and Pittsburgh can be considered typical. Most class rates are lower in trailer-on-flat-car service than in box car service. Of 72 specific commodity rates, 35 are lower and 18 more are so close to all-rail rates that a 10% cut would make them lower. Minimum weights are universally lower in trailer-flat car tariffs.

**Volume Business**—"If traffic cannot be solicited from carload shippers and is not available in any substantial quantity from shippers now using motor common carriers, then it must be solicited from the motor common carrier himself.

"The motor common carrier has the volume. While one eastern railroad was moving 14 trailers between Chicago and New York during the first five weeks of operation under the new tariffs, one motor common carrier, one out of 25, could have moved 40 a week. Among all motor carriers operating between Chicago and New York, there exists enough volume for a trainload of trailers a day in each direction. This is available every day, and what is more important, this only constitutes a fraction of their total movement.

"Trailers-on-flat-cars exclusively for the motor common carrier has more in its favor than volume. . . . It has attributes of economic efficiency, adequacy and absence of destructive competitive practices. . . . It is economically beneficial to the railroad, the motor carrier and the public.

"A railroad can make more net revenue by moving motor common carrier trailers in strictly line-haul service, and collecting a portion of the through rate, than by collecting the whole rate and performing the whole service.

"There is no empty car mileage when common carrier trailers are moved, while the non-revenue producing mileage in all-rail trailer-flat car service can be as high as 25%. In the common carrier service, the railroad can avoid the headaches of solicitation, rating, loss and damage



**THE TRANSPORT** and petroleum section of the Oakite Company's new laboratories at 350 Hudson street, New York. The laboratories occupy 30,000 sq ft on a single floor and are subdivided into three major sections—product development, customer service and engineering. Each is set

up with completely modern equipment to aid in study of the removal of accumulations of dirt on various surfaces and the relation of different cleaners to this problem. Provision is made to add a pilot plant for small scale manufacture of detergents and solvents prior to field testing.

claims, terminal pick-up and delivery, trailer maintenance, and many others.

"Perhaps you can understand now why it is that we, of Rail-Trailer, have adopted such a strong attitude toward restricting this service to motor common carriers. We do not claim it as a legal right; we believe in it as an economic reality."

## Equipment & Supplies

### LOCOMOTIVES

#### Class I Roads Install 878 Locomotives in 8 Months

Class I railroads put 878 new locomotive units in service in the first eight months of 1954, compared with 1,565 in the comparable 1953 period, the Association of American Railroads has announced. The 1954 total included 866 diesel-electric units and 12 gas turbine-electric locomotives; the 1953 installations, 1,550 diesel electric units and 11 steam and four gas turbine-electric locomotives.

New motive power installed by Class I railroads in August 1954 included 34 diesel-electric units and two gas turbine-electric locomotives, compared with August 1953 installations of 153 diesel-electric units and one steam and two gas turbine-electric locomotives.

On September 1, Class I roads had on order 86 diesel-electric units and 10 electric and three gas turbine-electric locomotives, compared with 380 diesel-electric units and four steam, 10 elec-

tric and 15 gas turbine-electric locomotives on order September 1, 1953.

The Milwaukee has been authorized by its board of directors to purchase 74 diesel units to replace all the road's remaining steam power. Electrified operation of portions of the line in Montana, Idaho and Washington will continue.

### PASSENGER CARS

The Rock Island has ordered 25 70-ft baggage cars from ACF Industries, Inc., at an approximate unit cost of \$29,000. Delivery is scheduled for next December and January.

### FREIGHT CARS

The Cotton Belt has ordered from the Pullman-Standard Car Manufacturing Company 200 50-ton 40½-ft box cars and 75 50-ton 50½-ft box cars at a total cost of \$1,830,000. Delivery is scheduled for next month. Twenty-five of the 50½-ft cars will be equipped with Evans DF loaders.

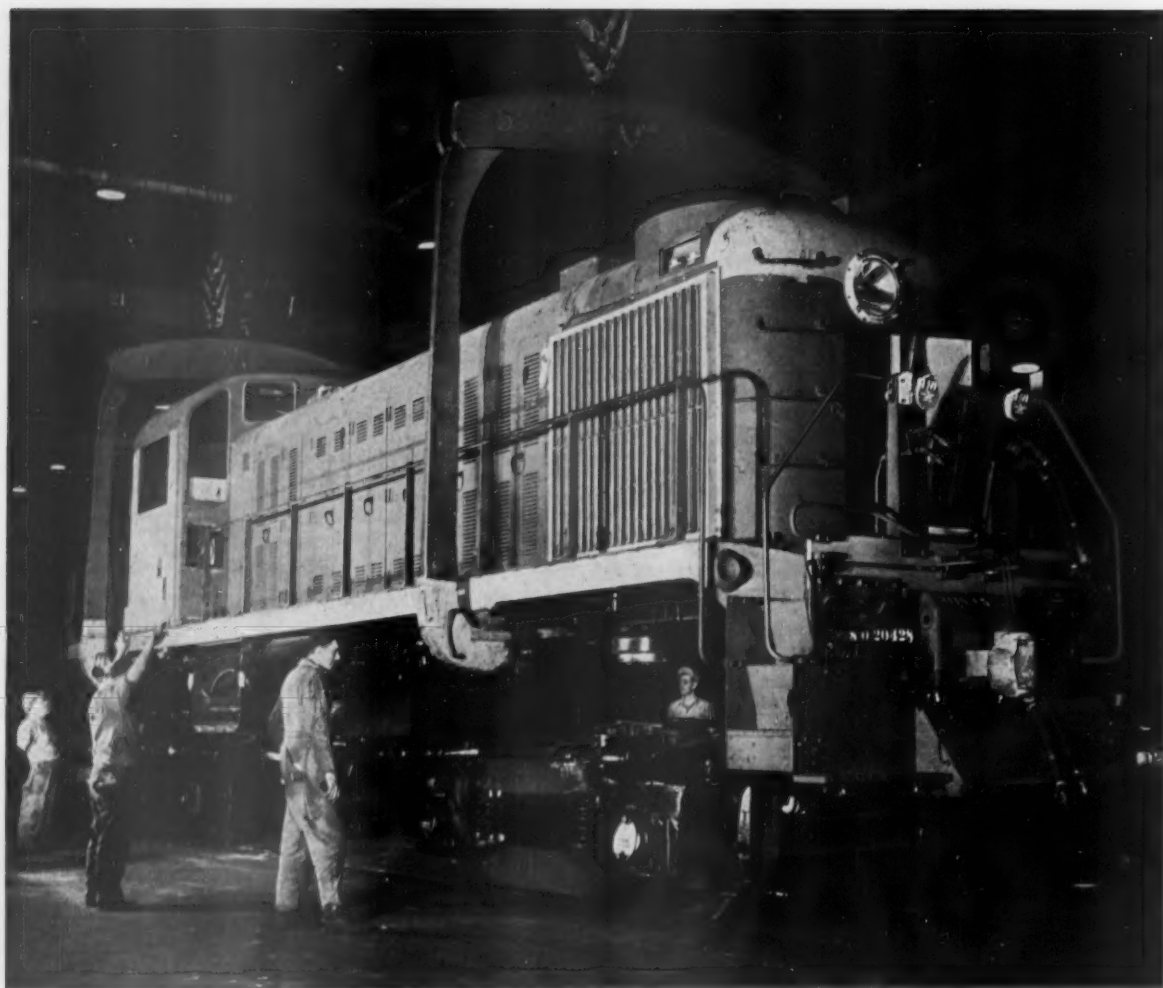
#### 2,297 Freight Cars Delivered in August

New freight cars delivered in August for domestic use totaled 2,297, compared with 1,801 in July and 5,557 in August 1953, the American Railway Car Institute and the Association of (Continued on page 26)



How Alco Repair Services Save You Time and Money

*Announcing:* **A NEW**



**ALCO FACTORY REPAIR-REBUILD SERVICE** at Schenectady, N. Y., returns locomotives and parts—including electrical components—in top condition at low cost . . . helps railroads make the most of the profit-building potential inherent in your Alco diesel-electric locomotives.



**AMERICAN**



# REPAIR SERVICE FOR LOCOMOTIVES

## NOW AVAILABLE AT ALCO'S SCHENECTADY PLANT

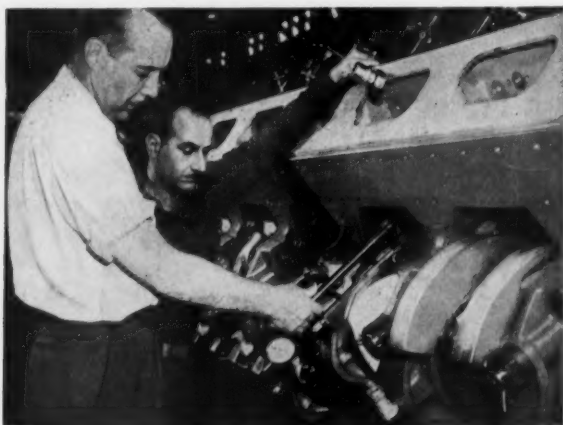
To help the railroads continue to get the most out of their diesel-electric locomotives—*without costly investment in major repair facilities and manpower*—American Locomotive Company has established at its Schenectady plant a complete new service for the repair, rebuild, and modernization of entire locomotives as well as component parts.

Alco Factory Repair-Rebuild Service makes full use of the same machinery, tools and inspection equipment employed for volume production of new Alco locomotives and parts, thus giving you a *fully integrated repair service with a single responsibility*. And

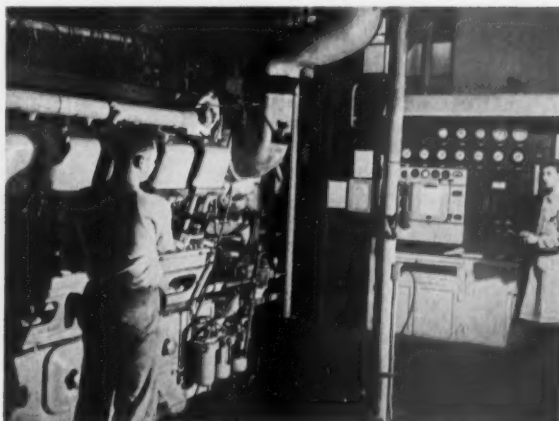
in addition . . . Alco offers you *improved unit exchange service*—through its Schenectady and regional warehouses—providing you with like-new "rebuilt" in exchange for your worn-out parts.

*This Schenectady Repair-Rebuild Service gives you*

- ★ Original manufacturer's complete engineering and design facilities—plus advanced techniques and proved experience.
- ★ Genuine Alco renewal parts with full warranty.
- ★ Skilled workmanship and quality control for better performance and protection.



**SPECIAL FEATURES** of Alco Factory Repair-Rebuild Service include strict inspection by factory craftsmen in accordance with new-equipment specifications.



**PRODUCTION AND TESTING FACILITIES** used for new locomotive manufacture are also utilized for rebuild service—further assurance of many more miles of dependable performance from your rebuilt locomotives.

# LOCOMOTIVE COMPANY

Sales and  
Service Offices  
in Principal  
Cities



**GOLD MEDALS** were won by the Great Northern, the Duluth, Missabe & Iron Range and the Texas & Northern. Left to right here are I. G. Pool, GN vice-president, operations; Cyril Ainsworth, president of the American

Museum of Safety, which makes the awards; F. J. Voss, DM&IR president and general manager; and J. D. McCall, T&N president. Presentations were made at a September 16 dinner in the Hotel Roosevelt, New York.

Railroads Get **Harriman Awards** for ...

## Best 1953 Safety Records

Three railroads receive gold medals, at ceremonies in New York, for leading their respective groups; certificates awarded to two switching and terminal companies and three railroads from each of three geographic regions



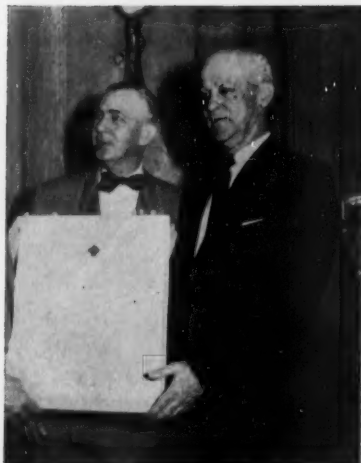
In the usual order: R. A. Johnson, vice-president and general manager of the Texas Mexican; W. C. Beaman, TM president and traffic manager; and M. Conring, TM claim agent and supervisor of safety, with certificate awarded to that road.



R. F. Handwerk (right), vice-president of the Conemaugh & Black Lick, accepts certificate from Robert S. Henry (left), AAR vice-president and member of the award committee, as J. E. Spafford, C&BL vice-president and general superintendent, looks on.



C. M. Schaefer (left), assistant to general manager, Chesapeake & Ohio; ICC Commissioner Owen F. Clarke (right), who also is a member of the award committee; and R. M. Markland, C&O assistant to vice-president, operations.



R. H. Short (left), Nashville, Chattanooga & St. Louis superintendent of safety, and F. Whittemore, NC&StL general manager.



J. A. Fisher, (left), president of the Reading, and J. J. McCool, Reading superintendent of safety, with certificate won by that road.



Commissioner Clarke (left), presents the certificate won by the Rutland to S. M. Rodgers, that road's general manager.



J. E. Slaven (left), superintendent of safety of the Chicago, Burlington & Quincy, accepts certificate awarded to that road from James G. Lyne (center), editor of *Railway Age* and chairman of the award committee. L. F. Hanke, CB&Q executive assistant, public relations, is at the right.



L. D. Curtis, president of the Atlantic & Danville, with certificate awarded to that road for its 1953 safety record.



W. H. Mapp (left), general manager and traffic manager of the Pennsylvania-Reading Seashore Lines, accepts that road's certificate from W. J. Patterson, member of the award committee and former Interstate Commerce Commissioner.



B. A. McDonald (left), superintendent of rules-safety for the Missouri-Kansas-Texas, accepting certificate awarded to that road from E. G. Plowman, vice-president and general manager of the U. S. Steel Corporation and member, award committee.



Left to right: G. M. Campbell, Baltimore & Ohio Chicago Terminal vice-president and executive representative; C. K. Strader, B&OCT superintendent; Mr. Ainsworth; and G. W. Elste, the road's superintendent of safety.



# GUN IRON

HUNT-SPILLER

**...THE MODERN METAL  
for Diesel Engine Wearing Parts**

Gun Iron castings, identified by the letters "HSGI", spell long, economical service for diesel engine wearing parts. Hunt-Spiller Gun Iron contains properties which provide unusual resistance to friction—extreme pressure—high heat—corrosion and erosion. These properties are recognized as vital for economical operation of diesel engine wearing parts.

The quality of Gun Iron is at all times completely controlled. It is produced in our own furnaces, cast in our modern foundry and, when desired, the castings can be completely machined in our manufacturing plant.

Look for the letters "HSGI"—Hunt-Spiller Gun Iron—for Diesel Engine Wearing Parts.



DO YOU WANT TO KNOW MORE of the products manufactured by Hunt-Spiller and the company behind them? These two brochures provide detailed information on diesel parts manufactured by the company and the production facilities being utilized. Copies of each will be sent without obligation upon request on your company letterhead.



**HUNT • SPILLER**  
**MANUFACTURING CORPORATION**

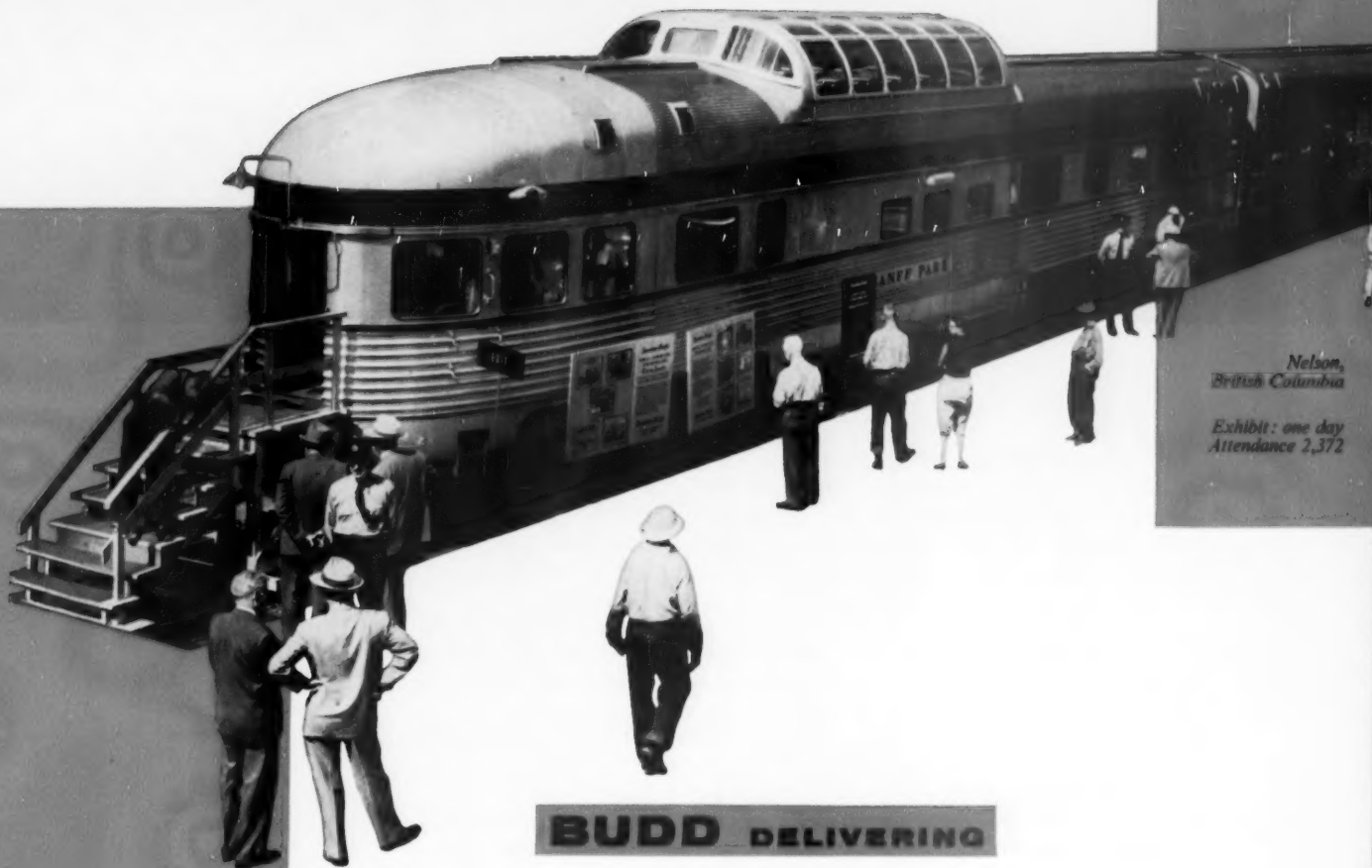
379 DORCHESTER AVENUE

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Canadian Representatives: Joseph Robb & Co., Ltd.  
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Export Agents: International Rwy. Supply Co.,  
30 Church Street, New York 7, N. Y.





*Nelson,  
British Columbia*

*Exhibit: one day  
Attendance 2,372*

**BUDD DELIVERING**

**173 CARS**

**TO THE**

**CANADIAN PACIFIC**

The Canadian Pacific makes a continuing study of railroad operations, and the performance of railroad equipment, all over the world.

One of the consequences of these studies was the placing of an order for 173 Budd all-stainless steel railway passenger cars—the largest single order for railway cars the Canadian Pacific has ever placed, or Budd has ever received.

The order includes 36 scenic dome cars, the first and only dome cars in Canada.

A look at the record of the performance of Budd cars over the past twenty years reveals the reason for the Canadian Pacific's decision to order cars of all-stainless steel construction. They require Class 1 to 4 repairs only half as often as cars constructed of other materials, and the repairs cost only half as much. They provide a maintenance saving on paint alone of as much as \$400. per car per year. Light weight permits more cars per train for the same motive power. All this in addition to their vastly greater strength.



*Chief  
Sorrel Horse,  
Banff*

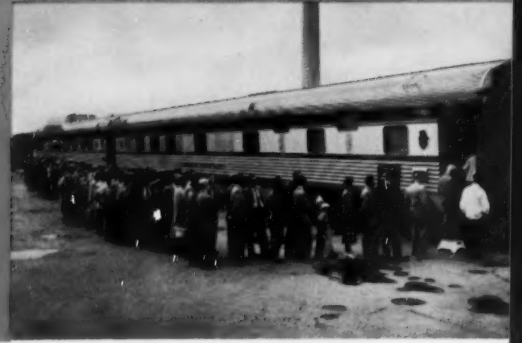
Edmonton, Alberta

Exhibit: two days  
Attendance 6,897



Calgary, Alberta

Exhibit: two days  
Attendance 11,399



All the cars will be equipped with Budd railway disc brakes and Budd Rolokron wheel slide prevention device, as well as all the other newest improvements in railway car equipment and furnishings.

The first two cars, a sleeper and a scenic dome car, were delivered in Montreal early in July, where they were put on exhibit for three days and then taken on a 10,000 mile transcontinental display.

In the first week more than forty thousand visitors inspected the cars. When the tour was over, the number exceeded 200,000. In less than a month they wore out the stair carpet to the dome, which, in normal service, would last ten years or more.

Indians, cow-pokes, miners, seamen, hunters, rangers, plainsmen, city-men, farmers and country folk—some of them came hundreds of miles just to see these beautiful, exciting new railroad cars.

Now, as deliveries accelerate, they are riding in them proudly and affectionately and, from the Canadian Pacific's standpoint, profitably. When all the cars are delivered, they will provide the consist for the finest trains that ever rolled on rails. The Canadian Pacific doesn't just think so. It *knows* so. The Budd Company, Phila. 15.



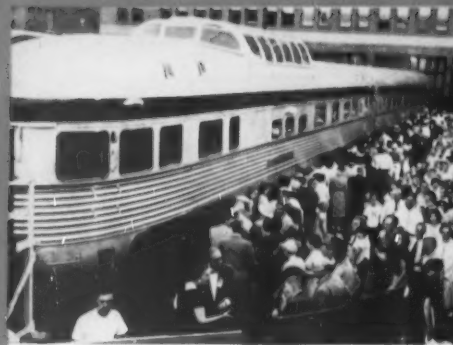
*Banff, Alberta*

*Exhibit: 30 minutes  
Attendance: 407*



*Ottawa, Ontario*

*Exhibit: 1 day  
Attendance: 3,596*



#### TABULATION OF CANADIAN PACIFIC ORDER

<u>Car Type</u>	<u>Number</u>	<u>Description</u>
Baggage-Dormitory	18	15 crew, 2 stewards, 35,600 lbs. baggage
Coach	30	60 passengers
Dome-Coach-Lounge	18	26-passenger coach, 24-passenger dome, 23-passenger buffet (73 passenger total)
Diner	18	48 passengers
Sleeper	29	4 open sections, 3 double bedrooms, 1 drawing room, 8 duplex roomettes. (25 passenger total)
Sleeper	42	4 open sections, 1 compartment, 5 double bedrooms, 4 roomettes. (24 passenger total)
Dome-Sleeper-Observation-Lounge	18	3 double bedrooms, 1 drawing room, 12-passenger beverage room, 24-passenger dome, 13-passenger observation lounge (58 passenger total)

**Budd**

PIONEERS IN BETTER TRANSPORTATION



*Lethbridge, Alberta—Exhibit: one day—Attendance 7,178*

# Congratulations—Canadian Pacific!

*on your new equipment*

*For Transcontinental Service to Canadians*



**INTERNATIONAL EQUIPMENT COMPANY LIMITED,  
MONTREAL, CANADA**

*Suppliers of*

"FRIGIDAIRE" Railway Air Conditioning And Food Refrigeration Equipment—Tried And Proven In Most Rigorous Canadian Service—and—On The Heavy End—On The General Motors Diesel Locomotive A.S.F. SIMPLEX CLASP BRAKES—The Power To Stop. For Safe, Sure, Stops—Dependable In All Kinds Of Weather—Year After Year. "HYATT" Roller Bearings—For Smooth Riding—Ease Of Maintenance—Long Wheel Life.

#### **Sales Offices**

**MONTREAL**

**TORONTO**

**EDMONTON**

**CALGARY**

**VANCOUVER**





## *Your Old Friend Presents a New Card*

The men you have known as representatives of Oxweld Railroad Service Company\* will now be calling on you as representatives of the newly formed Railroad Department of Linde Air Products Company.


The combination of these two Divisions of Union Carbide and Carbon Corporation has been effected so that you may be better served and have the full benefit of the combined knowledge and facilities of both organizations. Men of the OXWELD organization bring to the new Railroad Department years of valuable experience and a thorough knowledge of the railroad industry.

LINDE men, in turn, bring wide skill in welding

and cutting applications in a broad range of other industries that may be adapted for railroad use. In addition to your old OXWELD friends you will soon meet other LINDE representatives for the first time. You may be sure that these new friends will be just as helpful and co-operative as the OXWELD people who have served you in the past.

LINDE's coast-to-coast chain of District and Region Offices will now be able to serve more closely the needs of the railroad industry for apparatus and welding supplies, and the helpful technical service for which both LINDE and OXWELD have long been noted.

*\*"Linde" and "Oxweld" are registered trade-marks of Union Carbide and Carbon Corporation.*

**RAILROAD DEPARTMENT**  
**Linde Air Products Company**  
 A Division of Union Carbide and Carbon Corporation  
 30 East 42nd Street  New York 17, N. Y.  
 Offices in Other Principal Cities  
 In Canada: DOMINION OXYGEN COMPANY  
 Division of Union Carbide Canada Limited, Toronto



# CANADIAN PACIFIC'S New have Heywood



*Above—the interior of one of the 18 new Scenic Dome Lounge Cars constructed for Canadian Pacific by The Budd Company. Heywood Chairs bring the ultimate in travel comfort to these functional modern cars.*



*When these new streamlined cars go into service on CPR's transcontinental routes, Canadians will have their first chance to ride the dome-type car in their own country. Here again, Heywood's smart built-in seating will add to the pleasure of every trip.*



To serve Canada efficiently, Heywood has this big, modern plant in Orillia, Canada where transportation seating is manufactured. During the present great modernization project of Canadian railways, both this plant and our Gardner, Massachusetts plant have worked together to produce the tremendous volume of seating ordered.

# Streamlined Cars by **Budd**

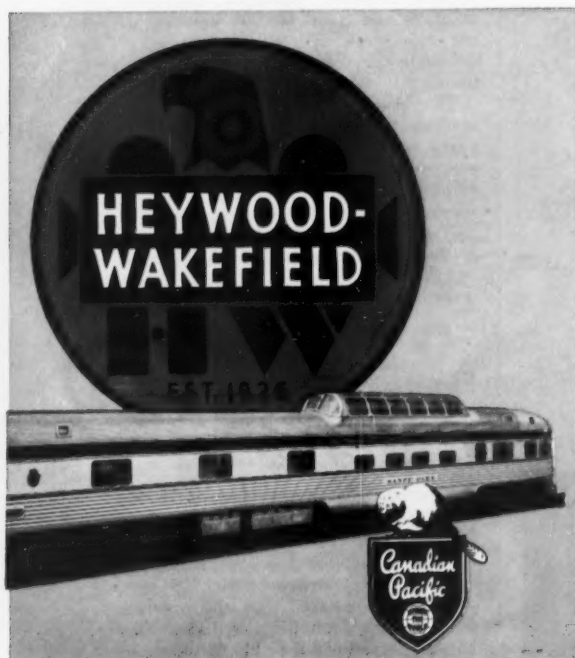
## Seating Comfort

A revolution in Canadian rail passenger travel... the biggest since the switch from wood to steel... has come into effect with Canadian Pacific's purchase of 173 ultra-modern stainless steel passenger cars from The Budd Company. 18 Scenic Dome Lounges, 18 Scenic Dome Coaches, 30 De Luxe Coaches, 71 Sleepers and 18 Dining Room Cars... a total of 155 cars in this group have Heywood-Wakefield Seating... assuring CPR's passengers of the best in modern, luxurious comfort.

**HEYWOOD-WAKEFIELD**  
 Transportation Seating Division  
 Gardner, Mass., Orillia, Ontario, Canada



*Shown above— interior of Canadian Pacific's new sleepers. These spacious cars are equipped throughout with Heywood seating and sleeping comfort.*



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**RAILWAY & POWER**

**ENGINEERING**  
*Corporation Limited*



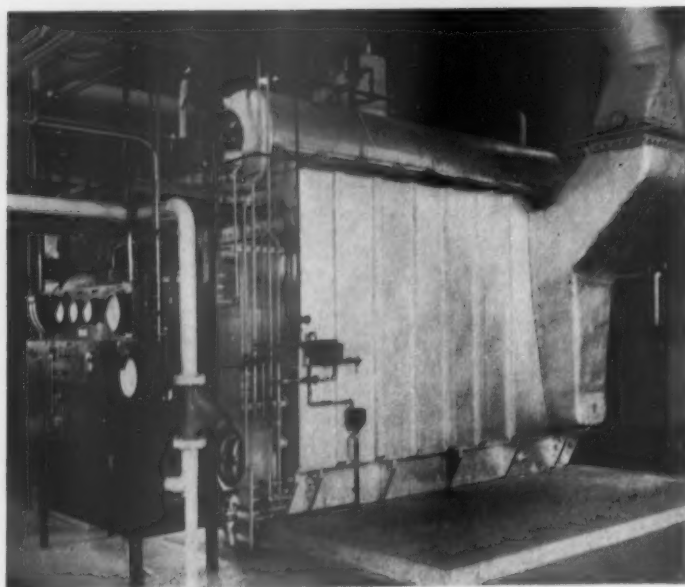
169 Eastern Avenue  
 TORONTO 2, ONTARIO

SALES OFFICES & WAREHOUSES

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NEW YORK



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Esisco Steam Locomotive Equipment

All Types of Steam Locomotive Fuel Boilers and Related Equipment

(Continued from page 13)

American Railroads have announced jointly.

Orders for 2,425 new freight cars for domestic use were placed in August, the announcement added, and the backlog of cars on order and undelivered September 1 was 13,013, compared with 12,889 on August 1. A breakdown by types of cars ordered and delivered in August, and of cars on order September 1, follows:

	Ordered Aug. '54	Delivered Aug. '54	On Order & Undelivered Sept. 1, '54
Box-Plain .....	1,542	960	5,866
Box-Auto .....	300	0	1,300
Flat .....	207	149	477
Gondola .....	0	26	67
Hopper .....	0	92	442
Covered Hopper .....	147	30	836
Refrigerator .....	0	627	2,600
Tank .....	229	286	1,358
Caboose .....	0	5	65
Other .....	0	122	2
<b>TOTAL .....</b>	<b>2,425</b>	<b>2,297</b>	<b>13,013</b>
Car builders ..	2,418	837	6,145
Railroad shops ..	7	1,460	6,868

The **Santa Fe** is inquiring for 1,300 freight cars, as follows: 250 50-ton flat cars, 150 70-ton mill-type gondola cars, 500 70-ton drop-end gondola cars, 100 50-ton box cars and 300 50-ton refrigerator cars.

## Labor & Wages

### Arbitrator Named in Canadian Wage Dispute

Gordon Sloan, chief justice of British Columbia, has been named by Dominion Prime Minister Louis St. Laurent as sole arbitrator, with practically unlimited powers, to settle the dispute between principal Canadian railways and their 145,000 non-operating employees over "fringe benefits" demanded by the employee organizations.

The demands, which the railways say would cost them \$60 million a year, were originally served on the companies last fall. This summer, the employees voted to strike, if necessary, to enforce the demands, but the federal government, in effect, forbade a strike and compelled the parties to agree to arbitrate.

## Figures of the Week

### Freight Car Loadings

Loadings of revenue freight in the week ended September 18 totaled 711,228 cars, the Association of American Railroads announced on September 23. This was an increase of 109,703 cars, or 18.2%, compared with the previous week, which included the Labor Day holiday; a decrease of 112,655 cars, or



13.7%, compared with the corresponding week last year; and a decrease of 162,368 cars, or 18.6%, compared with the equivalent 1952 week.

Loadings of revenue freight for the week ended September 11 totaled 601,525 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, September 11			
District	1954	1953	1952
Eastern	92,732	114,764	144,665
Allegheny	107,502	139,653	176,445
Pocahontas	40,741	50,046	69,718
Southern	103,322	109,508	137,012
Northwestern	97,924	130,440	150,621
Central Western	108,276	111,281	136,897
Southwestern	31,008	54,862	65,933

Total Western Districts	257,208	296,583	353,451
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Total All Roads	601,525	710,554	881,291
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Commodities:			
Grain and grain products	44,569	44,278	48,083
Livestock	10,223	7,557	12,671
Coal	98,418	115,680	177,350
Coke	6,642	11,798	14,368
Forest products	34,750	39,304	48,861
Ore	52,930	90,895	96,461
Merchandise l.c.l.	54,200	59,434	74,546
Miscellaneous	299,773	341,608	408,951

September 11	601,525	710,554	881,291
September 4	688,492	799,080	746,882
August 28	676,616	818,461	727,360
August 21	678,624	817,446	834,229
August 14	685,277	807,622	805,756

Cumulative total 37 weeks	23,609,729	27,422,838	26,282,235
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**In Canada.**—Carloadings for the seven-day period ended September 7 totaled 64,770 cars, compared with 101,278 cars for the previous 10-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
September 7, 1954	64,770	24,905
September 7, 1953	68,703	27,700
Cumulative Totals:		
September 7, 1954	2,458,432	979,414
September 7, 1953	2,716,497	1,130,372

## Securities

### Applications

**CHICAGO & EASTERN ILLINOIS.**—To issue \$15,350,040 of 5% debentures for 383,751 shares of CEI class A stock on an exchange basis of one debenture in the principal amount of \$40 for each share. The securities would be dated January 1, 1954 and mature January 1, 2054. Holders of class A stock would have no more than one year following the effective date of Interstate Commerce Commission authorization of the issue to act on the exchange offer. In its application, CEI stated the issue is designed to improve the "marketability" of its common stock, effect savings and improve the road's financial position.

**SOUTHERN PACIFIC.**—To assume liability for \$8,505,000 of equipment trust certificates to finance in part the following equipment costing an estimated \$11,357,684:

Description and Builder	Estimated Unit Cost
6 1,750-hp freight units (Electro-Motive Division, General Motors Corporation)	\$174,770
9 2,400-hp passenger units (Electro-Motive)	269,151
10 lightweight chair cars (Pullman-Standard Car Manufacturing Company)	176,359
645 50-ton auto cars (Southern Pacific Equipment Company)	7,772
105 50-ton box cars (S. P.)	9,092

The certificates, dated September 1, would mature in 15 annual installments of \$567,000 (Continued on page 52)

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3,000 lbs. at 24"

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FORK LIFT TRUCKS



Model Shown,  
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### More Operational and Service Features

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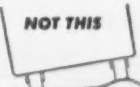
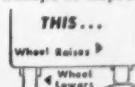
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Fluid coupling, oil-immersed clutch, constant mesh transmission — a combination that transmits power smoothly and efficiently with minimum wear and service. There is NO CLUTCH PEDAL — just ONE push-pull forward and reverse lever!

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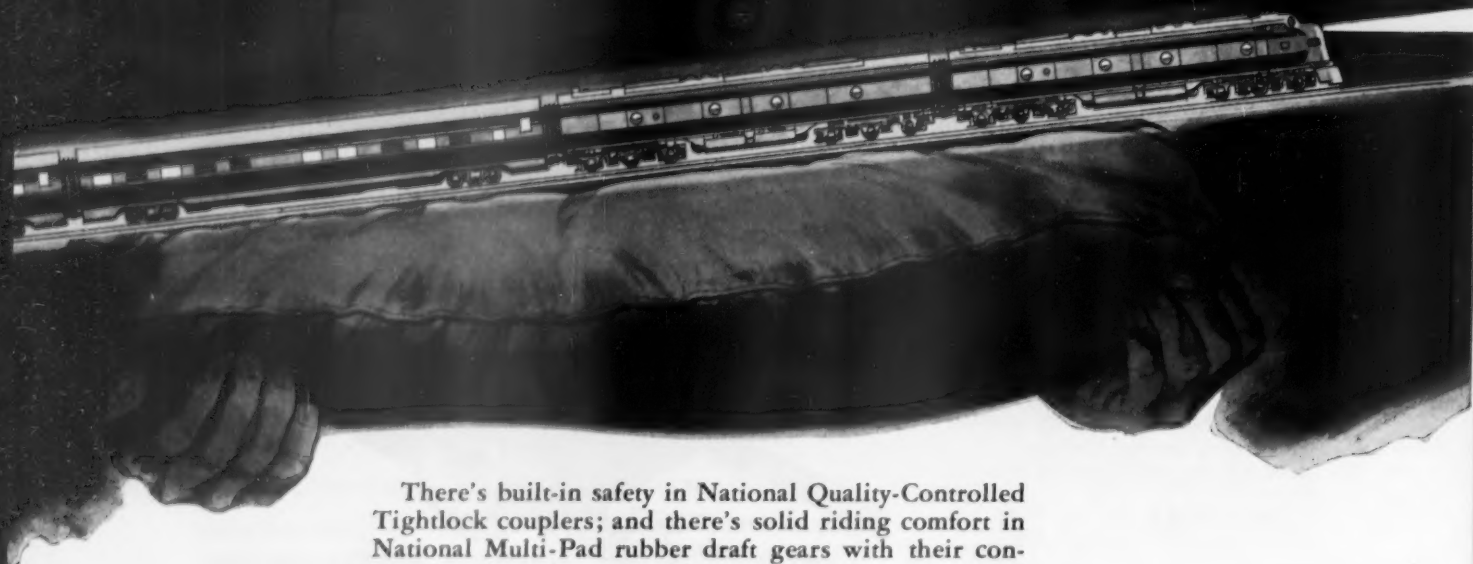
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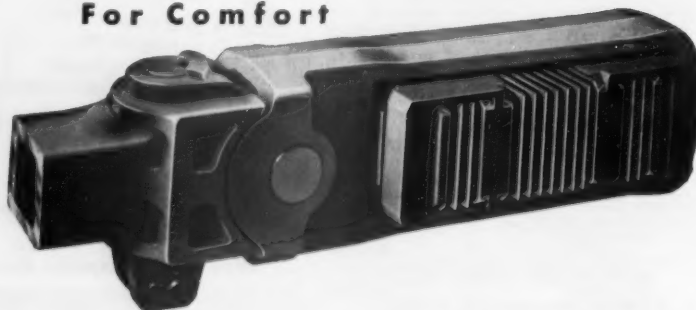
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## How Competition Endangers the Unions

One of the prerequisites for staying in business today is alertness to discern and circumvent, if possible, the inroads of competition. One of the handicaps of the railroads in their competition is the few hours of service and miles run by train and engine crews to earn a day's pay—compared to the hours worked and miles run for a day's compensation by crews of competing buses, trucks, and even airplanes. The fact that laws and union agreements calling for "full" crews are in effect against the railroads, but not competing transportation, is a further competitive disadvantage.

This paper favors attractive wages and working conditions for railroad employees. But it does not believe that coercive employment of unneeded people is in the interest of the employees themselves. Such rules—and paying a day's wages for only two or three hours of useful work—make railroad service unnecessarily expensive to patrons, and cause the loss of traffic and jobs. When railroads lose traffic because of costs entailed by unduly short hours, or excessive crews, in train and engine service—it is not just the train and engine service employees whose jobs are jeopardized. Job declines also occur in other departments, where employees put in eight hours' work for a day's pay.

The foregoing observations are prompted by the projected demands of the Brotherhood of Locomotive Engineers for a host of additional "benefits" (*Railway Age*, September 6, page 9), beyond the enormous one they already enjoy of having by far the shortest hours (and miles) in relation to wages of any employees serving any type of surface transportation. For their own welfare, and in their interest in their own job security, wouldn't the engineers be well advised to look into the service given by employees of competing agencies of transportation—before they add another bale of straw to the back of the overburdened railroad camel?

Engine crews formerly enjoyed an extremely favorable strategic position—which came to be reflected in their relative wage rates and hours of labor. That strategic situation has now been greatly weakened. That is to say, when railroads were the only available means of non-local transporta-

tion, and when competent handling of a steam locomotive was an occupation wherein adequate skill could not be quickly acquired—then it was at least a practicable policy for the railroads to be unusually generous toward this occupation. The railroads then found little difficulty in passing along the cost of this generosity to their customers—who had to use the railroads, anyhow.

People don't have to travel by rail now, and most of them don't. They don't have to ship by rail now, and many of them don't. Still fewer of them will do so if the already questionable liberality of the railroads in high pay for short hours in engine service is made still more expensive than it now is to the customers. Running an engine nowadays is a far more comfortable and less hazardous job than it used to be—and the hours of duty have declined as comfort has increased.

The fact should be faced by railroad people—employees and management alike—that it is *technologically* not impossible to operate trains automatically, without crews at all. It is probably not possible, yet, to operate trains *economically* without crews—but that would be (if true) only because the cost of making the operation entirely automatic might exceed the expense of crew hire. This obstacle to automatic operation has been overcome in other industries, and it is far from impossible that it will be overcome on the railroads.

Perhaps the operating unions might expect their "economic power" could prevent technological improvement of the railroads to this degree. Maybe. But the unions could not prevent the development of competing forms of transportation, employing a high degree of automation, from coming along and taking more and more traffic away from overmanned railroads. That belt-conveyor project in Ohio, for instance—that is certainly a large-volume carrier which would operate without train and engine crews. The strongest argument against it is that it could handle only a relatively narrow range of commodities, and would serve to undermine the common carrier railroads, which will handle anything. But suppose somebody came along with an entirely new type of highly automatic transportation which *would* handle all commodities? In short, the "economic power" of the railway unions cannot protect railroad jobs, in the long run. The only dependable protection for railroad jobs is ability by the railroads to give satisfactory transportation service at competitively attractive costs. The unions, in their own selfish interest, ought to make this objective a major concern of theirs.





## First Dome Cars Go to Canada

18 dome-observation cars among 89 sleeping cars of three types which the Canadian Pacific is currently receiving from Budd

As the first step in re-equipping its principal transcontinental passenger trains, the Canadian Pacific is taking delivery of the first dome cars for service in Canada. Built by the Budd Company, these are dome, double-bedroom, drawing-room, beverage-room, observation-room cars, of which 18 are on order.

Present deliveries also include sleeping cars with two combinations of accommodations, of which a total of 71 cars are on order. The number and variety of accommodations offered by the three types of cars are shown in a table. The three types are the first deliveries of CPR orders for a total of 173 passenger-train cars, all placed with the Budd Company, which will provide consists for 18 complete train sets.

A feature of the accommodations in these cars is the duplex roomettes, of which there are eight in each of the 25-passenger sleepers. An upper and a lower roomette require a combined longitudinal floor space of 11 ft 2 in. Two roomettes of the type in the 24-passenger cars require a comparable space of 12 ft 10½ in. The reduction is the result of overlapping of the adjoining upper and lower berths. This is accomplished by sliding the bed in the lower roomette longitudinally under the floor of the upper roomette for daytime occupancy and using part of this space for the foot of the bed when it is made up for night occupancy.

The bedrooms, compartments and drawing rooms all have enclosed toilets. Those in each pair of bedrooms

are side by side with lavatory alcoves between, an arrangement which makes effective use of space and simplifies construction.

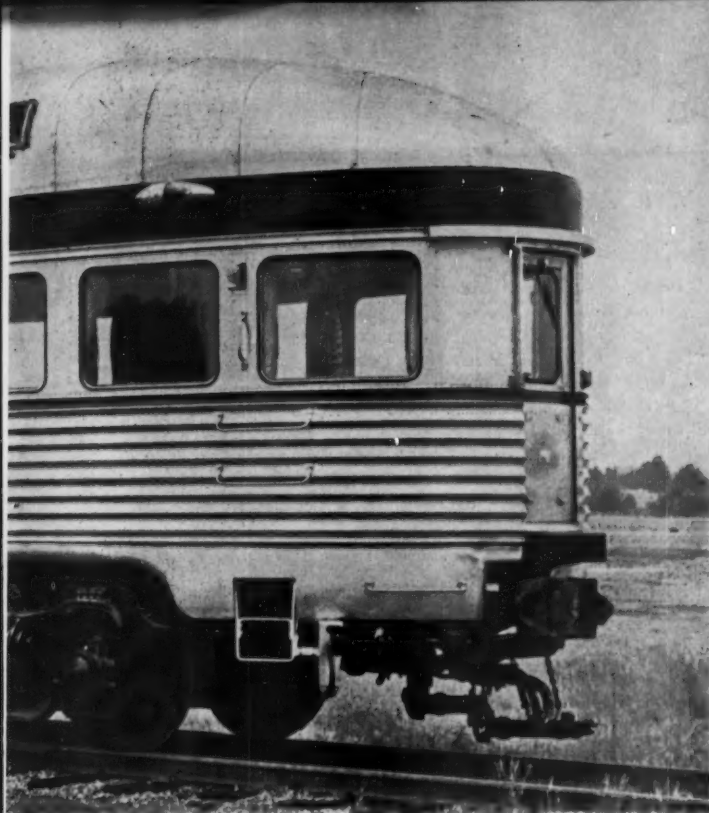
### Five Types of Accommodations

The 25-passenger sleepers have five types of accommodations. In front are four open sections, with adjacent toilet and washroom facilities at the end of the car. In the center are three double bedrooms and a three-passenger drawing room. Two of the double bedrooms can be thrown together by opening a folding sliding partition between them. The lower berths close into recesses in the corridor partition and the uppers are raised into the ceiling for daytime occupancy. Each bedroom has two upholstered chairs which can be folded for under-berth storage at night.

The drawing room has longitudinal upper and lower berths, the lower folding into a recess in the transverse partition and the upper rising to the ceiling. A transverse bed is formed by lowering the sofa back. The toilet and wardrobe are on the corridor side of the space. The remainder of the car is occupied by eight duplex roomettes. These are arranged with two lowers and two uppers alternating on each side of the central passageway.

The 24-passenger cars have four types of accommodations. Like the 25-passenger sleepers, there are four open sections at the front end of the car, with men's and wo-





CANADIAN PACIFIC EMBLEM, in relief, is placed near each end of the full-length sleeping cars, and near the front end of the dome-observation cars.



25-PASSENGER duplex-roomette, drawing-room, open-section-sleeping car. The unpainted exterior is accented with Tuscan red on the letterboard and the window belt

men's toilet facilities adjoining at the end. In the middle of the car are a two-passenger compartment, with transverse upper and lower berths, and five double bedrooms opening from the side passageway. Two pairs of the bedrooms can be thrown together en suite by opening folding, sliding partitions. The partition between the compartment and fifth bedroom can also be opened, throwing these two rooms together.

At the rear end of the car are four full-size roomettes, all on one level. The berths are narrowed toward the foot so that they may be lowered with the door closed. Curtains are not needed at these doors.

rail. The name of the road is in gold and the letters on the name plate are Tuscan red edged with gold. Body is of all-stainless-steel construction.

The third type is the dome observation-lounge car which will be an outstanding feature of any train of which it forms a part. At the front end, arranged as in the 25-passenger sleeper, are three double bedrooms and a drawing room. As in the 25-passenger car, two of the bedrooms may be thrown together en suite.

These rooms occupy the space in front of the dome. Two steps in the passageway back of the drawing room lead down under the dome and alongside of the glass-enclosed 12-passenger beverage room. At the rear of the beverage room two steps up lead to the 13-passenger observation lounge behind the dome. There is a writing



DOUBLE BEDROOM—ready for the night.



OBSERVATION LOUNGE interior.

## WEIGHTS (LB) OF THE NEW CPR CARS

	Trucks	Body ready to run	Total
Duplex-roomette, double-bedroom, drawing-room, open-section sleeping cars .....	38,350	100,720	139,070
*Roomette, double-bedroom, compartment, open-section sleeping cars .....	40,000	97,700	137,700
Dome, observation-lounge sleeping car .....	37,790	110,630	148,420

\*Estimated

desk alongside the stairway which leads up to the 24-passenger dome-observation section.

The interior finish of these cars is characterized by the use of a variety of materials, of which most of the decorative surfaces are a satin-finish Westinghouse Micarta. The materials include the Micarta without other backing material and aluminum sheets, plywood, and metal-faced plywood faced with Micarta.

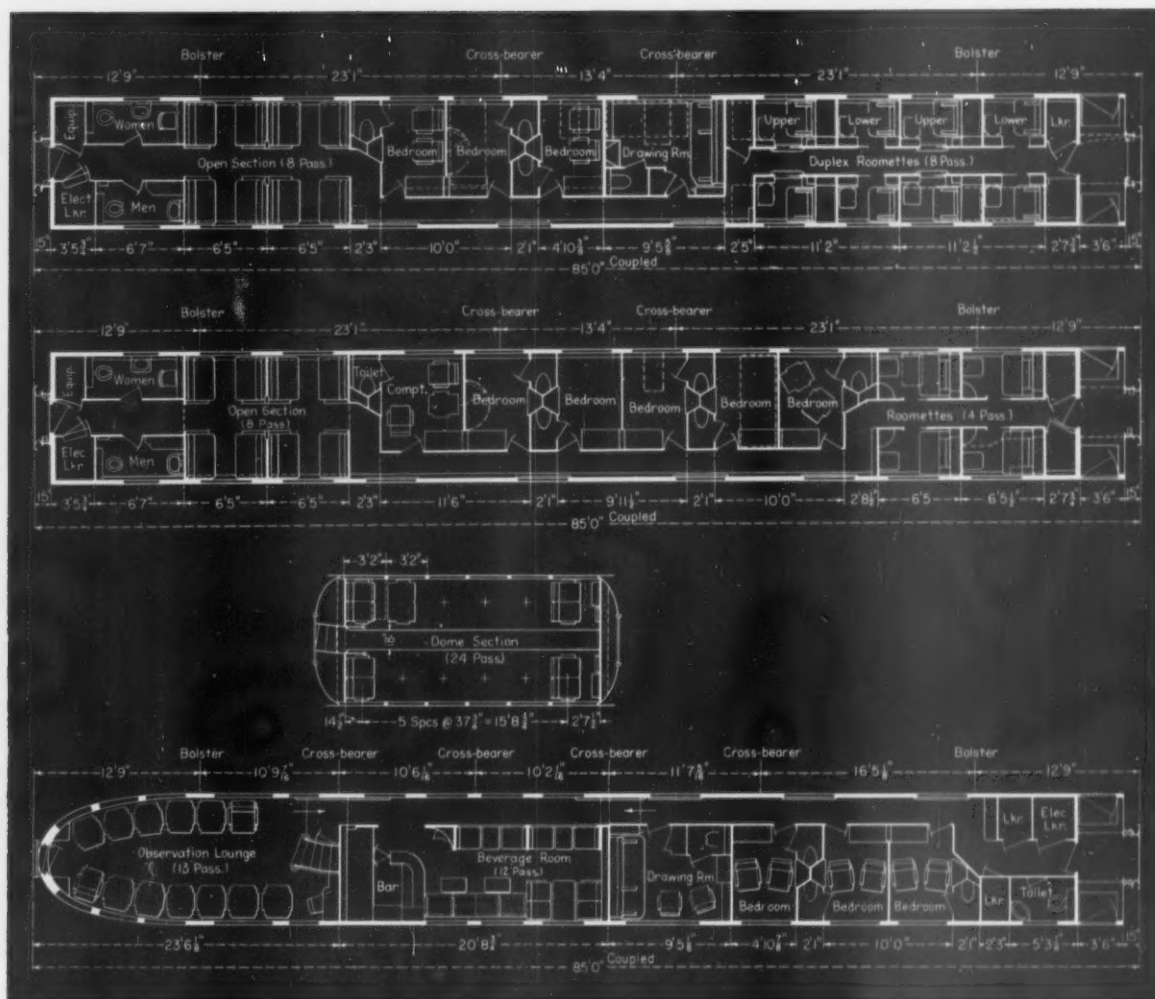
The latter is used in partitions where the strength of the metal is needed. Molded fiberglass impregnated with plastic is used on the curved surfaces at the sides and rear of the observation-lounge ceilings. Here, the surface is painted. The unbacked laminated plastic panels,  $\frac{1}{8}$  in. thick, are applied on wainscots and pier panels, and headlinings, except as noted above, are plastic-coated aluminum sheets.

The plastic panels are applied with satin-finish stainless steel moldings which add a pleasing accent to the decorations. Experience with these surfaces to date indicates that they do not deteriorate with age. The surfaces are not readily damaged by scratching, are easy to clean, and require no painting.

Seven color schemes are used in the 89 sleeping cars—two in the 25-passenger duplex-roomette cars, three in the 24-passenger cars, and two in the dome-observation cars. Each involves the use of colors in several combinations in the various sections. Grays predominate on walls and ceilings combined variously with blues, brown and green on wainscots and room doors. Colors in great variety are used in carpets and upholstery.

In the 25-passenger duplex-roomette cars walls and ceilings throughout are in light orchid gray with marine blue wainscots and room doors. In 14 of the cars the main carpet in the passageway and aisle is a cheerful pattern of rose, light blue, light brown and light gray. Upholstery in the open sections is dark rose. Permanent head rests of Cordoglas in silver color are applied on roomette seats and drawing-room sofas in all three types of cars. In the roomettes and bedrooms carpets are a blended pattern in three shades of blue. Chairs in the bedrooms and the drawing-room sofa are upholstered in blue fabric. Room doors are rosewood brown on the inside.

In the other 15 cars the main carpet, of the same pattern, is in rose and gold tones and upholstery in the open sections is blue. In the rooms the carpet is in rose and maroon tones. Upholstery in the roomettes is rose



THREE CAR TYPES of the Canadian Pacific's order are shown in these floor plans: (top) the 25-passenger duplex-

roomette combination; (center) the 24-passenger roomette combination; (bottom) dome, observation, sleeping car.

clay and in the bedrooms and drawing room, blue. Patterned drapes have a navy background.

Decorations in the 24-passenger sleepers follow three color schemes, two with walls and ceilings of light warm gray and one with light orchid gray except in the bed-

rooms and compartments. Wainscots in one are rosewood brown and room doors, Norway blue. The main carpet is in rose tones and maroon, and the open-section upholstery is rust. The carpet in the rooms is rust, ecru, coral and brown. The chairs are upholstered either in red,

### **DOMESLEEPER NAMES DESIGNED TO ENCOURAGE TRAVEL**

The three types of sleeping cars now being delivered to the Canadian Pacific by the Budd Company are named systematically. Each dome-observation-lounge car bears the name of one of Canada's national or provincial parks, among which every part of the country is represented.

Each suggests the recreational treat which awaits the traveler in the Maritime Provinces, in the Laurentians of Quebec, among the lakes and forests of Ontario, or among the peaks and lakes of the Rocky Mountains.

Each car of the two types of full sleeping cars is named for a distinguished Canadian.

Some of these persons are familiarly associated with Canadian history; all contributed in some way to the nation's welfare.

In tribute to the country's bilingual heritage, the names are divided between the "Chateau" class, which are assigned to the 25-passenger duplex-roomette cars, and the "Manor" class, which are assigned to the 24-passenger roomette cars. Each "Chateau" car bears the name of a distinguished Canadian of French origin. Each "Manor" car is named for a distinguished Anglo-Canadian. A plaque in French and English on each car tells the story of the person whose name the car bears.





**MURAL** in oil of a national or provincial Canadian park, by a Canadian artist, is the feature of the under-dome



beverage room (left) of each dome-observation car. At right, the dome, looking down stairway into the lounge.

coral or brown, with contrasting arms. Doors on the room side are Norway blue. The drape pattern has a gold background.

Wainscot and room doors in the second scheme are blue, and the main carpet is in three tones of green gold. Upholstery in the sections is cafe-au-lait. The room carpets are a lively pattern of sand, beige, blue, coral and dark brown, and the room side of the doors is rosewood brown. Chair upholstery is either turquoise with green piping, or cafe-au-lait seat covers and tan arm rests. Drapes have a gray background.

The wainscoting of the third scheme is rosewood brown. The main carpet is two tones of rose and maroon, and the open-section upholstery, ashes of roses. Room carpets are rose and gold, and doors, rosewood brown. The bedrooms and compartment of these cars have mauve rose walls and light orchid gray ceilings with doors in marine blue. Chairs are upholstered in green or ashes of roses with plum arm rests. Drapes have a blue background.

Two color schemes are used in the decorations of the dome observation-lounge sleepers. In one, walls and ceilings of the passageway and observation lounge are ecru with rosewood brown wainscot and room doors. The main carpet (in passageway, beverage room and observation lounge) is in light tones of rose, blue, gray and brown.

The corridor partition of the under-dome beverage room is safety glass above the wainscot. Patterns etched in the plastic layer of the glass are illuminated by edge lighting from fluorescent lamps below the bottom of the glass. On the outside and end walls of this room in each car is a mural in oil, which depicts a scene in a Canadian national or provincial park for which the car is named. The mural in each of the 18 cars is the work of a Canadian artist chosen by Robert W. Pilot, RCA, president of the Royal Canadian Academy of Arts. At the rear end of the room is a small bar with a hand-carved and painted linoleum front and a special starlight canopy above.

Beyond the dome at the rear is the observation lounge. Here, to harmonize with the mixed tones of the rug and the yellow and brown of the walls the chairs are upholstered in red or blue. Drapes have a charcoal background. On the wall at the right of the stairway to the

dome at the forward end of the observation lounge is a mural painted by one of Canada's artists. This is in the form of a decorated map of the park for which the car is named.

In the dome section the wainscot is marine blue, and dome mullions and ceiling, rosewood brown. Aisle and stair carpet is blue. Under the seats the main carpet is repeated. Upholstery is chamois.

The bedrooms are carpeted in blue; walls and ceilings are rose beige, and doors, brown. The chair upholstery is red, coral or blue, and drapes, blue.

The second dome observation-lounge car color scheme has light orchid walls and ceiling, with wainscot and room doors in green. The carpet in the passageway is rust, ecru, coral and brown, and that in the observation lounge, turquoise, taupe and beige. The lounge chairs are upholstered either in taupe or turquoise. Drapes are green and black. The dome wainscot and ceiling are in two tones of green. Aisle and stair carpet is a pattern in three tones of green, and the carpet under the seats, rust, ecru, coral and brown, in the same pattern as the aisle. Seat upholstery is red coral.

### Structural Features

All of the cars are 85 ft long, coupled, with truck centers 59 ft 6 in. apart. Weights are shown in a table. The car bodies are of Budd stainless-steel construction, fabricated by Budd's Shotweld process. The side frames are modified plate girders which form the sides of a hollow box beam, of which the roof is the top chord and the floor structure the bottom chord. Torsional stiffness is imparted by the end frames. The flat deadlight panels of the sides are stiffened with longitudinally corrugated sheets. A corrugated girder plate is welded to the side posts between the belt rail and the side sill. Light snap-in fluted strips fit in the wide corrugations of the girder plate and conceal the structural spot welding. The roof rails, belt rails, and side sills are continuous structural members.

Characteristic of the Budd corrugated roof are the external purlines which extend from collision post to collision post.

The horizontal Z-shape transverse floor members which form a weather-tight underfloor and provide trans-



verse supports for the upper floor constitute a horizontal plate girder tied to the center and side sills, which is stiff against longitudinal cornering and lateral forces.

At the ends of the dome are strong transverse structural partitions. At this point the normal center sills are interrupted and a shallow center sill is secured against the bottoms of the normal sills at the two ends of the car. The normal center-sill loads are divided between the drop center sill and the two strongly reinforced side sills by the floor structure. Three crossbearers support the low floor and brace the center sill under the dome and also serve as a part of the water-tank enclosure in this area.

The interruption of the continuity of the roof structure by the dome requires that the compressive roof loads be carried past the dome in the rails under the dome windows which are reinforced for that purpose.

The roof over the front end of the dome observation car is the normal coach height of 13 ft 6 in. Behind the dome, however, it is raised 6 in. higher to provide room for the air-conditioning equipment mounted over the observation-room ceiling without unduly lowering the ceiling and spoiling the attractive proportions of this room.

The cars are insulated with 3 in. of Ultralite in ceilings, side walls, end walls, roofs and floors. Where panel heating is applied, except in dome and under-dome areas, the thickness of the insulation is reduced to 2 in. and it is covered with stainless-steel sheets on the inside surface. In the dome and under-dome areas, the full 3 in. of material is applied, compressed, and held in place by stainless-steel sheets. Body end doors are insulated with 1½ in. of the same material.

The interior surfaces of the roof carlines and the floor pans are covered with ¼ in. of Insulmat sound-deadening material. This material is also applied to the interior surfaces of the bottom half of the divided vestibule side entrance doors. The interior surfaces of the wall panels of the bar in the dome observation-sleeper are covered with sound-deadening material before the application of the insulation.

As a further protection against the transmission of noise, the underfloor areas over the trucks of the sleeping cars is covered with a layer of compressed body insulation enclosed by a stainless-steel cover. This is applied directly to the underside of the floor pans of the car body. The underside of the vestibule steps and vestibule platform are also insulated with ¼ in. of Insulmat.

All windows in the sleeping cars, except those with curved glass in the dome and observation-lounge sections of the dome observation-lounge car, are Robert Mitchell double-glazed breather type, with safety glass panes inside and heat-resistant plate glass with a greenish tint outside. The inside panes are prism glass in the men's and women's toilet-room windows. The curved windows of the dome and observation-lounge were furnished by Adams & Westlake. The panes in the dome-section windows are laminated glass of two ¼-in. panes of clear Solex with a ⅛-in. plastic layer between on the inside and a ¼-in. tempered Solex on the outside.

In each of the 24- and 25-passenger sleeping cars in one transverse bedroom and one open section and in one transverse bedroom in each dome observation car the windows have hinged type sash which can be opened from the inside to handle stretcher cases.



## DE LUXE CROSS-CONTINENT SERVICE

The 173 cars now being built by the Budd Company for the Canadian Pacific are of seven types, as follows:

- 18 baggage-dormitory cars
- 30 coaches
- 18 dome, coach, buffet-lounge cars
- 18 dining cars
- 42 roomette, double-bedroom, compartment, open-section sleeping cars
- 29 duplex-roomette, double-bedroom, drawing-room, open-section sleeping cars
- 18 dome, double-bedroom, drawing-room, beverage-room, observation-lounge sleepers

All are of stainless-steel construction. The consist of each train set for which the cars were ordered will include a baggage-dormitory car, a dome coach-buffet-lounge car, a dining car, and a dome bar-lounge-observation sleeper. The coaches and other two types of sleeping cars will be assigned according to traffic needs. The equipment will serve two transcontinental trains in each direction.

The seats in the dome section of the dome observation car are Sleepy Hollow non-reclining non-reversing type with adjustable foot rests. Backs and cushions are foam rubber.

Seats in the beverage-room are built on a stainless-steel base. Seat cushions are foam rubber, with hair-and-spring back cushions. They are leather covered. The lounge-chair frames are of stainless-steel, satin finish, with foam-rubber seat and back cushions.

In the two types of non-dome sleeping cars air conditioning is furnished by two-speed Frigidaire compressor units and one dry type Frigidaire condenser unit. Com-



**MOLDED** fiber glass plastic panels being installed in an observation lounge.

pressor motor capacity is 12 hp. Seven-ton Frigidaire evaporators in the non-dome sleeping cars are sectionalized for modulation during cooling and are provided with copperfin heating coils of 120,000 Btu capacity per hr.

In the dome observation cars there are two six-ton air-conditioning systems. A Trane single-speed unloading type compressor is driven by a 14½-hp motor with a two-unit Trane dry type condenser. The evaporator unit for the dome is arranged for modulation with a two speed fan motor. Each evaporator has a heating-coil capacity of 80,000 Btu per hr. All motors are arranged for operation on unregulated voltage.

In the non-dome sleeping cars the evaporators and blower equipment are located above the ceiling over the toilets and lockers at the front end. In the dome cars one evaporator unit is over the lockers at the front end, and the other, over the ceiling of the observation-lounge.

In the non-dome sleepers air enters the plenum cham-

ber through screened openings in the roof on each side of the car. Return air passes through ceiling grills in the passageway where it mixes with the fresh air. Fresh air and return air are both filtered before entering the plenum chamber where they are mixed. Distribution is partially through Multi-Vent panels over the open sections and through branch ducts to Anemostats at the individual berths and in the sleeping rooms. Air is exhausted by fan from toilets and sleeping-room annexes.

In the dome observation car separate systems handle the air to the two floor levels. The air entering at the vestibule end is discharged in the drawing room, bedrooms, beverage room and observation lounge. The outlet is through Anemostats in the sleeping rooms and Multi-Vent panels in the beverage room and observation lounge. Air for the dome system enters a plenum chamber above the ceiling of the observation room. A triple section duct in the dome distributes air through continuous slots at the sides and through Anemostats from the center of the ceiling. Return air is collected through grills in the bulkhead at the stairway end of the dome and conducted to the plenum chamber where it mixes with the fresh air.

The cars are heated by fin-tube radiators under stainless-steel guards at the floor along each side, supplemented by overhead heat from the radiators installed in the air-conditioning evaporators. Panel heating in the sides of the cars below the windows in all passenger spaces, including the dome area, permits air to flow upward from the heater guard in the ¼-in. space between the inside lining and the metal sheet on the inside face of the insulation. This air is released through a slot at the window sill where it serves as a temperature screen between the passenger and the relatively cold surface of the window glass.

Temperatures are maintained thermostatically by the

## PARTIAL LIST OF MATERIALS AND EQUIPMENT ON THE NEW CARS

End underframe .....	Youngstown Steel Car Corp., Niles, Ohio.	Normal windows, doors (body end, and side loading) ..	Robert Mitchell Co., Montreal.
Truck castings including Central Bearings; couplers and yokes ....	Canadian Car & Foundry Co., Montreal.	Parcel racks .....	Robert Mitchell Co., Montreal.
Equalizer .....	Canton Drop Forge & Mfg. Co., Canton, O.	Glass:	
Wheels and axles .....	Bethlehem Steel Co., Bethlehem, Pa. Standard Steel Works Div., Baldwin-Lima-Hamilton Corp., Burnham, Pa.	Window, normal; dome, doors and mirrors .....	Pittsburgh Plate Glass Co., Pittsburgh.
Shock absorbers .....	General Steel Castings Corp., Buffalo.	Window, prism .....	Pressed Prism Plate Glass Co., Morgantown, W. Va.
Center pins .....	W. H. Miner, Inc., Chicago.	Venetian blinds .....	Ajax-Consolidated Co., Chicago.
Journal bearings:		Window-curtain material .....	Pantasote Co., New York.
Timken .....	Railway & Power Engineering Corp., Montreal.	Berth curtain material ..	Dominion Woollens & Worsted, Ltd., Hespeler, Ont.
SKF .....	Canadian SKF Co., Montreal.	Body insulation .....	Gustin Bacon Manufacturing Co., Kansas City.
Springs .....	Crucible Steel Co. of America, Pittsburgh.		J. W. Mortell Co., Kankakee, Ill.
Truck brakes; wheel slide control .....	Budd Co., Philadelphia.	Plywood .....	U. S. Plywood Corp., New York.
Air brakes; end connections; air-signal valves; conductor's valves .....	Canadian Westinghouse Co., Hamilton, Ont.	Plastics — interior walls, table tops, etc. ....	Westinghouse Electric Corp., Pittsburgh.
Hand brake .....	National Brake Co., New York.	Carpet .....	Harding Carpets, Ltd., Brantford, Ont.
Thermoid pads .....	Thermoid Co., Trenton, N. J.		Toronto Carpet Co., Toronto, Ont.
Body center plate .....	Pennsylvania Electric Steel Castings Co., Hamburg, Pa.	Galley tile .....	Norton Co., Worcester, Mass.
Draft gear (Canadian Waugh) .....	Adanac Supply Co., Montreal.	Rubber tile .....	B. F. Goodrich Co., Akron, Ohio.
Sound deadening .....	Fabree'a Products Co., Boston.	Upholstery:	
Diaphragms .....	Gourock-Bridport Ltd., Montreal.	Dome seats .....	Collins & Aikman Corp. of Canada, Montreal.
Vestibule curtains; window fixtures .....	Adams & Westlake Co., Elkhart, Ind.		Railway & Power Engineering Corp., Montreal.
Windows:		Folding chair covers, sofa seats and built-in seats .....	Goodall Fabrics, Inc., New York.
Curved observation and dome .....	Adams & Westlake Co., Elkhart, Ind.		

Vapor zone control system, with manual settings controlled by the attendant. Temperatures in the rooms are subject to individual control by the occupant. In the dome observation car one of the two circuits covers both side walls of the dome and the other, both sides of the two lower levels.

All of the cars are provided with steam anti-freeze protection for drains, water-filling valves and hopper discharge openings, as well as underflood water tanks. Hopper outlets have steam loops, with traps, around the discharge openings insulated and enclosed in stainless steel. Lavatory and bar drains have contacting steam lines attached with copper wire and insulated.

### Electrical System

The electrical system is direct current, nominally of 115 volts. The non-dome sleepers have 30-kw Safety generators and the dome sleepers, 35 kw, all driven by Spicer drive units. All are equipped with 120-volt, three-phase, 60-cycle motors for standby service. Each car has a single-phase, 60 cycle, 3-kw a-c motor alternator which supplies current at 110 volts for fluorescent lighting and convenience outlets.

Batteries have 600-amp-hr capacity at the 8-hr rating. Those on the non-dome sleepers are Exide; those on the dome observation cars, Gould-National.

The cars have Safety lamp regulators of the carbon-pile type. All lighting in passenger-occupied sections is fluorescent, except for the enclosed berth lights which are accessible only when the berths are made up for the night. Bedrooms and corridors are lit with center ceiling fixtures. The observation-lounge room has indirect lighting around the sides of the ceiling and direct lighting from center ceiling fixtures. Two fluorescent lighting fixtures are placed along the sides of the dome ceiling.

### CARS BEING DELIVERED TO THE CPR

No. of cars	No. of passengers	Accommodations
18	24 dome 9 berth 25 lounge	Dome, 3 double bedrooms, 1 drawing room, beverage room, observation lounge
29	25	8 duplex roomettes, 1 drawing room, 3 double bedrooms, 4 open sections
42	24	4 roomettes, 5 double bedrooms, 1 compartment, 4 open sections
89		

Steps to the dome are lighted from the sides and the handrails on either side of the stairway are illuminated plastic rods. Five blue incandescent lamps at alternate seat pedestals illuminate the floor of the dome aisle.

Each sleeping car has an electromechanical circulation type water cooler operating on 110-volt d-c current, regulated voltage. Faucets and paper-cup dispensers are located in each room, in the passageway at the open-section end of the non-dome sleepers, and at the end of the side passageway at the front end of the dome-observation-lounge sleepers. The water inlet to the cooler is fitted with a No. 3 Everpure filter. A No. 7 Everpure filter is provided at the water station in the bar of the dome observation-lounge car.

All cars are equipped with a public-address and music system. Two channels are for music rendered from tape (Continued on page 52)

#### Seats:

Coach and dome (Heywood-Wakefield) ....	Railway & Power Engineering Corp., Montreal.
Folding chairs (sleeping rooms—Dwight Austin); lounge chairs .....	Brigadier Engineering Products, Montreal.
Vanity and observation lounge chairs; card-table chairs ....	Clarin Manufacturing Co., Chicago.
Smoking stands .....	Robert Mitchell Co., Montreal.
Bar equipment; refrigerators (Frigidaire) .....	Angelo Colonna, Philadelphia.
Air-conditioning equipment:	
Dome sleepers .....	Trane Co., Chicago.
Non-dome sleepers (Frigidaire) .....	International Equipment Co., Montreal.
Air diffusers .....	Anemostat Corp. of America, New York.
Air filters (Farr) .....	Pyle-National Co., Chicago.
Grills .....	Control Equipment Co., Montreal.
Insulation:	
Air ducts .....	Barber Colman Co., Rockford, Ill.
Refrigerant lines; under-car .....	Gustin Bacon Manufacturing Co., Kansas City.
Pipe covering (htg. system) .....	Union Asbestos & Rubber Co., Chicago.
Heating system; and valves and couplers; hot water; connectors and hose .....	Canadian Johns-Manville Co., Montreal.
Fans and blowers .....	Vapor Heating Co. of Canada, Montreal.
	Canadian Sirocco Co., Montreal.
	Westinghouse Electric Corp., Pittsburgh.

#### Generator; a-c power; lamp regulator .....

Spicer drive .....	Safety Car Heating & Lighting Co., New Haven.
Batteries .....	Holden Co., Montreal.
	Exide Batteries of Canada, Montreal.
	Gould-National Batteries of Canada, Kingston, Ont.
Battery charging and standby receptacles; marker light; fuse tester; trainline lamp regulator .....	Pyle-National Co., Chicago.
Annunciator and buzzer system (Edwards) .....	Colonial Electric Products, Inc., Paterson, N. J.
Public address system ....	RCA Victor Co., Ltd.
Lighting fixtures .....	Luminator, Inc., Chicago.
	Safety Car Heating & Lighting Co., Montreal.
Trainline connectors .....	Joy Manufacturing Co., St. Louis.
	Pyle-National Co., Chicago.
Water-fill valves .....	Canadian Westinghouse Co., Hamilton, Ont.
Lavatories (folding type and fixed metal) .....	Ozone Metal Products Co., Ozone Park, L. I., N. Y.
Hoppers; lavatories ....	Robert Mitchell Co., Montreal.
Miscellaneous valves:	
water cooler .....	International Equipment Co., Montreal.
Water filters .....	Tested Appliance Co., Toronto, Ont.
Deodorizer .....	Chemicals, Ltd., Montreal.
Fire extinguishers .....	General Detroit Corp., Detroit.
	Walter Kidde & Co., Belleville, N. J.
Paint, exterior .....	Dolphin Paint & Varnish Co., Toledo.
Paint, interior .....	Sherwin-Williams Co., Cleveland.



## Questions

## and Answers FOR THE TRANSPORTATION DEPARTMENT

As railroads become dieselized, or approach that goal, the utilization of diesel power is receiving increasing attention. In this column in the issues of August 2 and 30, the chief operating officers of three roads described some of the methods used on their properties to try to assure best utilization of diesel power. This week, two other railroads tell of their efforts to use such power to best advantage.—G.C.R.

### ***On the Union Pacific—Central maintenance cuts parts inventory, increases utilization.***

The Union Pacific formerly assigned power to superintendent's divisions. However, since the advent of diesel locomotives the trend has been to assign power to trains rather than to divisions. As this trend continues, division limits, insofar as power is concerned, have all but been eliminated.

Assignment and distribution of power is handled by a member of my staff. Since he is in close touch with operations over the entire system, he can readily move power to and from any portion of the railroad as needs change. Flow of traffic along with daily reports of average miles and detention time are used to determine such changes in needs of local forces.

Our recent purchase of 205 diesel units permitted assigning similar loco-

motives to certain territories with a central maintenance point (not heretofore possible), resulting in reduced parts inventory as well as improved utilization and maintenance.

To keep abreast of the many changes and improvements in component parts of the diesel locomotive we have and will continue to send supervisory personnel to training schools. In addition, we are holding classes of instruction at many of our key terminals. Personnel concerned with train operation are furnished tonnage ratings on the various locomotives, and it is our purpose to assign diesels so that we obtain maximum utilization and handle maximum tonnage consistent with the fast schedules of today.—E. Hicks, vice-president—operation, Union Pacific.

### ***On the Santa Fe—How a completely dieselized road does it.***

The general manager—mechanical division, with headquarters in Chicago, is responsible for assignment of diesel power, subject to approval of the operating vice-president. Distribution of power assigned locally to a grand division is the responsibility of the four general managers over their respective territories. Dispatching of power locally on a division is, of course, the responsibility of the chief dispatcher.

The Santa Fe is completely dieselized. Passenger locomotives are operated in a system pool protecting all service for the system, with maintenance primarily at Barstow, Cal.

Freight locomotives are divided and operated in two pools, one known as the "Barstow pool"; the other the "Cleburne (Texas)-Argentine (Kansas City)-Corwith (Chicago) pool." These two pools provide power for all through freight service for the system, except for territories lying south of Cleburne, Tex., north of Bakersfield, Cal., and south of San Bernardino, Cal. Power for these three short territories is maintained in three separate pools, and for the most part is made up of road-switcher units, operated in multiple as service and tonnage dictate. This contrasts with road-type locomotives, composed of either three or four units, which protect through service elsewhere on the system. Road-switchers also handle local and mixed assignments. Diesel yard engines are assigned to individual yards.

System pooling of power permits all running repairs covering routine maintenance, mileage and form inspection work, for both freight and passenger pool locomotives, to be handled at three points; namely, Barstow, Cleburne and Argentine. Road-switchers and yard engines receive running

maintenance work at division points where assigned. Heavy repair work, with minor exceptions, is handled at our two main shopping points—San Bernardino and Cleburne.

On the one occasion when a temporary surplus of diesel power existed for a short time, we absorbed excess power by adding the fourth unit to road locomotives normally using three units.

The two pools of freight power, one consisting of three-unit locomotives and the other of four-unit locomotives, quite often overlap in order to bring about the most economical and efficient operation of power. Advantage is also taken of what might be termed "easy" power situations by accelerating our shopping programs so that when a rush period is upon us we may have the uninterrupted use of a greater part of our freight power to see us through.

Where service requirements have permitted, we have staggered schedules, both through freight and local assignments. Due to the greater efficiency of the diesel locomotive over steam, we have found that by advancing a given schedule into a terminal two or three hours and by setting back the companion schedule to the same extent, one diesel locomotive will perform the same work as two steam locomotives formerly assigned. In other words, the trains now meet in the terminal rather than on the road.

Likewise, we have found it expedient to couple up certain local assignments with yard tricks so that the same locomotive protects both a local road assignment and one or two yard assignments. This is particularly true where local freight trains operate into terminals usually employing more yard engines on the second or third tricks.

CONDUCTED BY G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

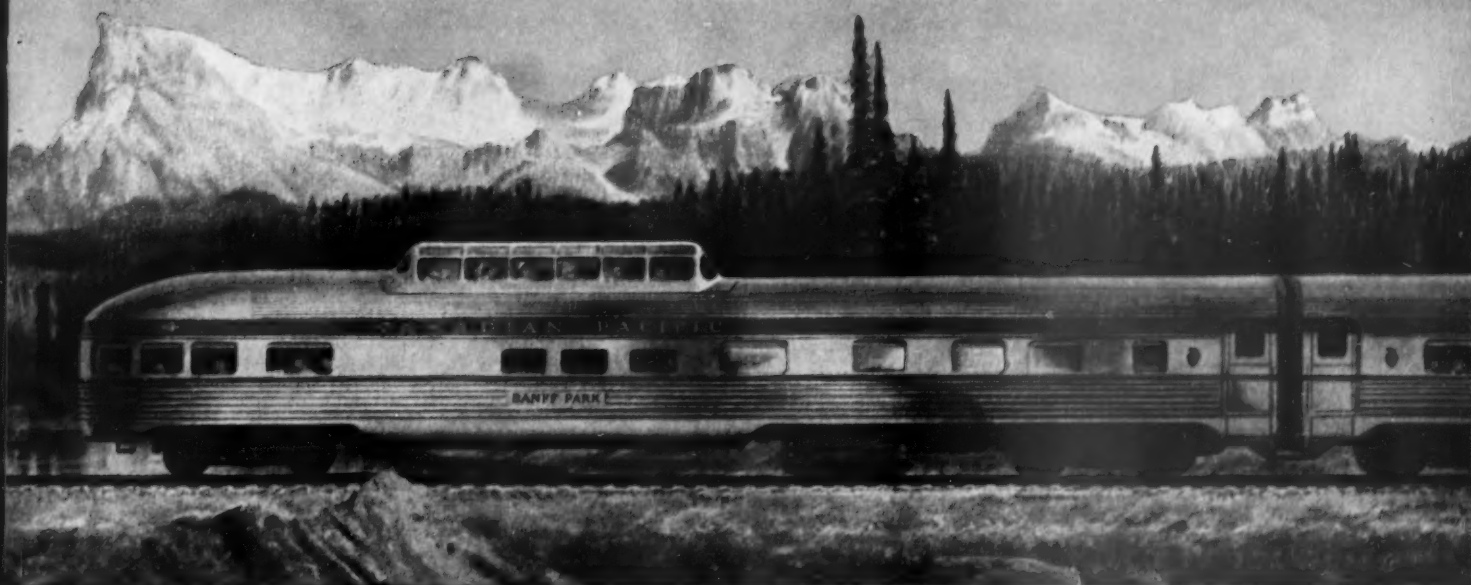


# ***SCENIC DOMES***

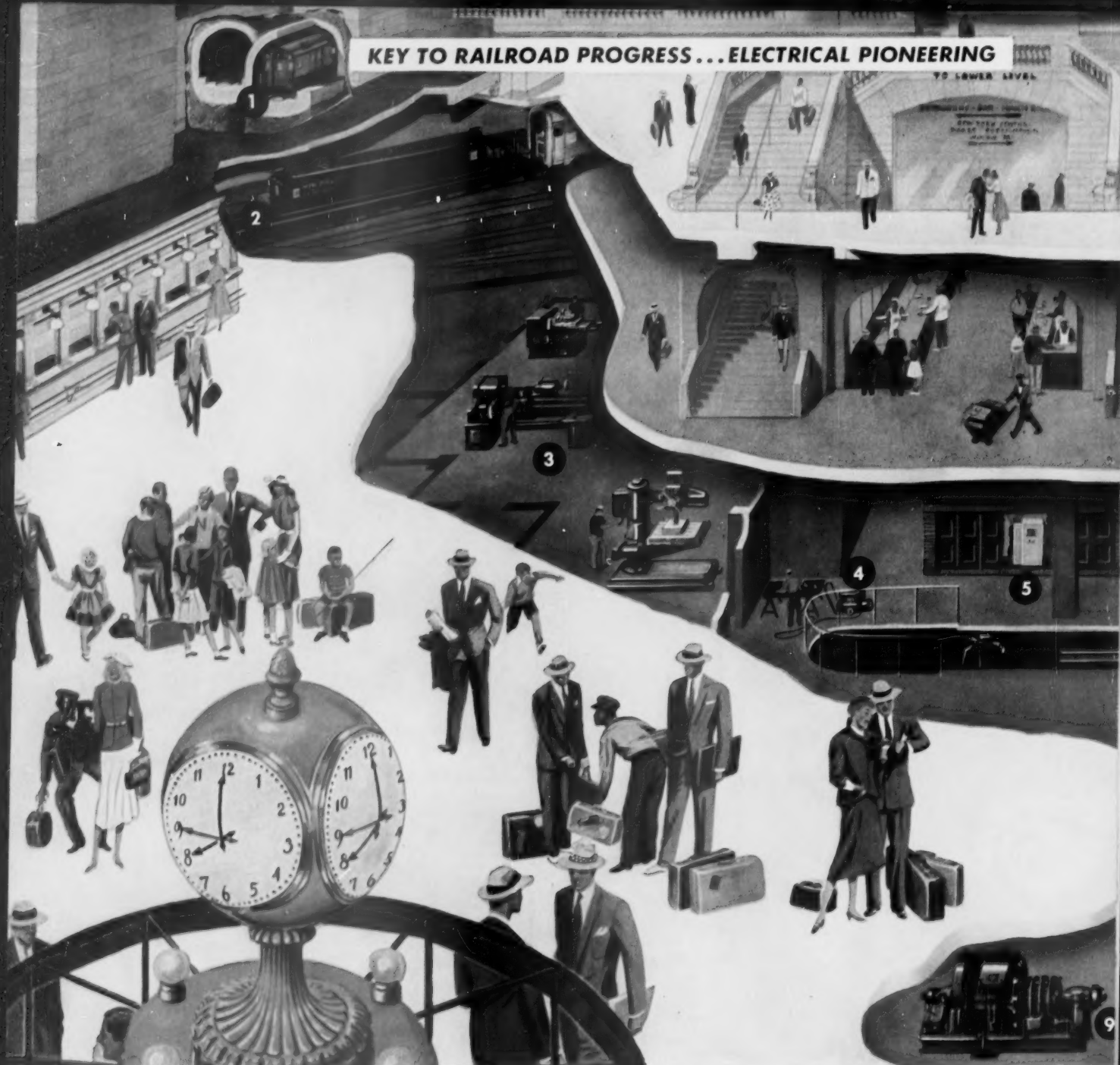
**ANOTHER**

*Canadian Pacific*

**FIRST  
IN CANADA**



## KEY TO RAILROAD PROGRESS... ELECTRICAL PIONEERING



### THESE ELECTRICAL SERVANTS KEEP RAILS HUMMING IN GRAND CENTRAL TERMINAL

1. Subway car equipment. 2. Traction power (3rd rail). 3. Terminal maintenance shop facilities. 4. Welder. 5. Transformers for light and power. 6. Battery charger. 7. Electric battery trucks. 8. Passenger car electrical equipment (heating, air conditioning, lighting). 9. Converters to change current from AC to DC. 10. Fire pumps and house pumps. 11. Distribution panel for light and power. 12. Motor-driven refrigeration machine for concessions. 13. Heating equipment. 14. Motor-driven ventilation equipment. 15. Multiple unit car. 16. Electric locomotive. 17. Signal and control tower equipment. 18. Elevator controls and motors. 19. Lighting.

## HOW ELECTRICITY SPEEDS

**G-E equipment helps railroads in continuing program to improve vital electric services in vast "underground cities"**

Every year, more than 54,000,000 passengers pass in and out of New York City's Grand Central Terminal.

Thanks to electricity, the job is done smoothly, swiftly. Locomotives, switches, signals, station lighting—all depend on electric equipment. In one year, enough electricity is used to meet all the needs of a city of 386,000 people . . . over 193,000,000 kilowatt hours!



Artist's Cutaway of New York's Grand Central Terminal shows some of the electrical equipment which helps make possible smooth operation of this underground city.

## 196,000 RIDERS A DAY THROUGH GRAND CENTRAL

As far back as 1906 General Electric supplied much of the electrical equipment and many of the locomotives that operate out of Grand Central Terminal, and modern electric equipment for subway and commuter cars. Today, G.E. is still helping to find new ways to move rail traffic easier, faster.

The nation's railroads are doing a tremendous job in helping America travel. Working closely with them, General Electric engineering and research will help further this railroad progress in the years to come. General Electric Company, Schenectady 5, New York.

115.2

*Progress Is Our Most Important Product*

**GENERAL  ELECTRIC**

THIS IS THE SECOND in a series of messages appearing in news and railroad magazines to give the public a better understanding of the vital role played by the nation's railroads in our everyday lives.



**How to protect  
a \$1-million  
investment  
for just \$495!**



**THE MILWAUKEE ROAD'S** Central Sign Shop is typical of the modern, efficient shops now in operation on 14 Class One roads. This shop turns out more than 1,000 reflectorized signs a month using "Scotchlite" Reflective Sheeting and the 6' x 12' high-speed vacuum applicator. Just *eight minutes* in the applicator and a sign is ready for use!

The term "Scotchlite" is a registered trademark of Minnesota Mining and Manufacturing Company, St. Paul 6, Minn. General Export: 122 E. 42nd St., New York 17, N.Y. In Canada: London, Ontario, Canada.

**A LUXURY STREAMLINER** speeds through the black, rainswept night. Up ahead the engineer knows there's a 40-mile curve. But where? And when to let up on the throttle? Suddenly, the headlamp catches a flash of yellow . . . a *reflectorized speedboard*. The throttle goes forward . . . the brakes ease on . . . in plenty of time for the \$1,000,000 train, with its valuable cargo, to round the curve smoothly and safely—thanks to just \$4.95 invested in a sign of "Scotchlite" Reflective Sheeting!\*

### Visible at night 1/2 mile away!

Wide-Angle Flat-Top "Scotchlite" Sheeting, as used by the Milwaukee Road on the speedboard shown, has the extra brightness and greater target value to provide nighttime recognition at a half-mile. This extra reflective power is effective even in extremely heavy rain. Furthermore, the long-term durability of "Scotchlite" Sheeting makes it the most *economical* sign surfacing material you can use. Couple this long life with the Central Sign Shop Method of fabricating signs, and you have modern signs designed for modern needs, manufactured in the most economical way possible.

Why not let us tell you more about cost-saving, investment-protecting "Scotchlite" Reflective Sheeting? We'll also give you complete information on the Central Sign Shop System. Just write: Minnesota Mining and Mfg. Co., Dept. RA-74, St. Paul 6, Minn.

\*\$4.95 is the average cost of a Speedboard using "Scotchlite" Reflective Sheeting as produced by the Milwaukee Road.

Reg. U. S. Pat. Off.

**SCOTCHLITE**  
BRAND  
**REFLECTIVE SHEETING**







FROM TOWER at east end; yardmaster supervises operations in the yard. Communications console is equipped with radio, talk-back-speaker and paging-speaker circuits

for conversing with engine and ground crews. Pneumatic tube system connects tower with west end of yard and with general yard office.

THIS NEW FLAT YARD PROVIDES . . .

## Quick Handling for Perishables

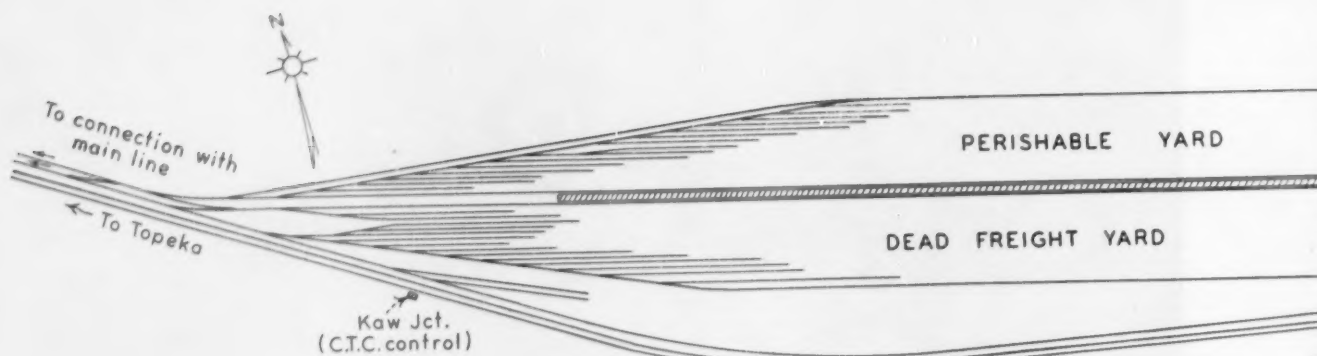
Union Pacific installation at Kansas City, designed to expedite eastbound traffic, features track layout centered around mechanized icing facilities

"Fourth KF arrived west end yard 4:00 am with 71 perishables. Reefers spotted icing platform 4:15 am and released after complete re-icing at 5:10 am. All perishable transfers delivered to various connecting lines before 7:30 am." This is typical of the kind of service the Union Pacific is able to give shipments through its recently completed 2,764-car flat-switching yard in Kansas City, Kan. The all-new \$4 million installation at Eighteenth street, adjacent to the Rock Island's Armourdale yard, handles all UP eastbound traffic through the Kansas City gateway and supplements the Armstrong yard, which formerly handled both east and westbound movements.

Included in the new installation is a 200-car capacity icing platform, built by Pacific Fruit Express, which is equipped with mechanical icing and salting machines and a 3-mile ice-conveyor system. Other features of the

CONCRETE and stainless steel were used in construction of yard tower which, in addition to housing yardmaster's office in upper portion, has rooms for communications equipment and storage space below. Yard crew's wash and locker room is attached to tower at the first floor level.





LAYOUT OF YARD is rather unusual, with icing platform in the center. North section accommodates switching of . . .

yard include complete radio and intercommunication systems, an extensive pneumatic tube network, and power switches with remote-controlled interlocking signals at the entrance to the yard from the double-track main line.

### Determining Yard Design

In designing the new yard installation three important factors had to be taken into consideration:

(1) Kansas City is the eastern terminus of a UP line that divides at Topeka. One fork extends west to Denver and thence north to Cheyenne and Laramie, where it connects with the main line west from Omaha. The other runs northwest from Topeka to a junction with the main line at Gibbons, Neb., near North Platte. About 90 per cent of UP traffic at Kansas City is interchanged with other roads. During 1953, 327,889 cars were received from connecting lines and 330,638 cars delivered.

(2) Perishable shipments make up a sizable portion of the eastbound traffic through Kansas City. In 1953 approximately 30,000 reefer cars were handled. In the single month of July this year, 7,817 cars of perishables moved through this gateway. The UP reports that perishable traffic through Kansas City is continuing to increase because routings to points east of Chicago are available which by-pass the Chicago area.

(3) All trains arriving at Kansas City, except those in local service between Kansas City and Denver, have been blocked previously at North Platte. Thus, it is only necessary to perform individual car switching where diversions are involved or in handling local trains.

Because of the operating conditions presented by these factors, the new yard was constructed for flat-switching rather than as a hump-retarder yard, as would probably have been the choice under conditions requiring heavy switching of individual cars. The yard consists of 34 tracks of which the longest is approximately 4,800 ft. Because of the volume of perishable business, one of the prime considerations in the layout was efficient handling of reefers, particularly for icing and quick switching for transfer to connecting lines.

A rather unusual layout of tracks places the 4,500-ft icing platform in the center of the yard, with 17 tracks on either side. The tracks adjacent to the platform on each side accommodate cars being iced. The 16 tracks on the north side of the icing tracks are used for switching perishable cars only, while the 16 tracks on

the south comprise a "dead freight" switching and hold yard. At each end separate leads serve the north and south sections of the yard.

With this arrangement it is possible to handle switching in either of the two sections without interfering with the other. Movements to and from the icing tracks and the north section of the yard can be made at either end of the yard without tying up the switching leads in the south section; it is possible for four yard engines to perform switching simultaneously without interfering with each other's movements.

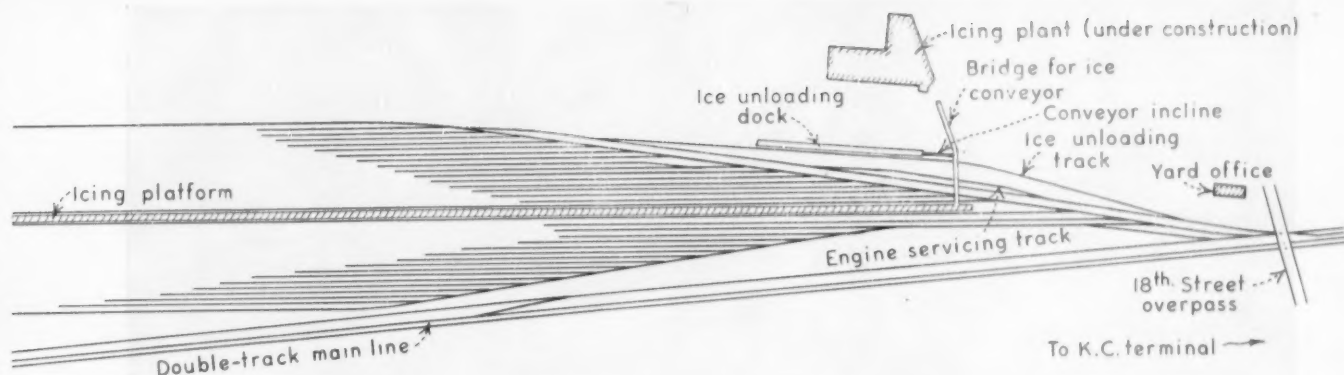
### Platform Built on Piling

The island type icing platform has two levels, the top level being 100 car-lengths long and the lower 60 car lengths. The platform is constructed on two rows of treated timber piling driven on 12-ft centers, with the rows 13 ft apart. Both the upper and lower decks of the platform are 13 ft 8 in. wide and are of wood construction.

### Operation of Icing Facilities . . .



ICING PLATFORM can accommodate 100 cars on either side, and is equipped with a chain conveyor system for supplying ice on each of its two decks.



... perishables; south section is for dead freight handling. Four engines can switch in yard without interference.

tion. At the east end a two-story headhouse which surmounts the platform houses PFE offices and wash and locker rooms for employees.

Each deck of the platform is equipped with a chain conveyor which supplies cakes of ice along the full length of the deck. All of the ice currently being used is delivered at the yard in refrigerator cars from an ice plant elsewhere in the city. These cars are spotted on a track along the north side of the yard adjacent to an ice unloading platform. As ice is unloaded from the cars it is picked up by a conveyor on the unloading dock and carried up an incline to an overhead steel truss span extending across to the icing platform. Another conveyor on the overhead bridge delivers the cakes to the conveyor system on the icing platform.

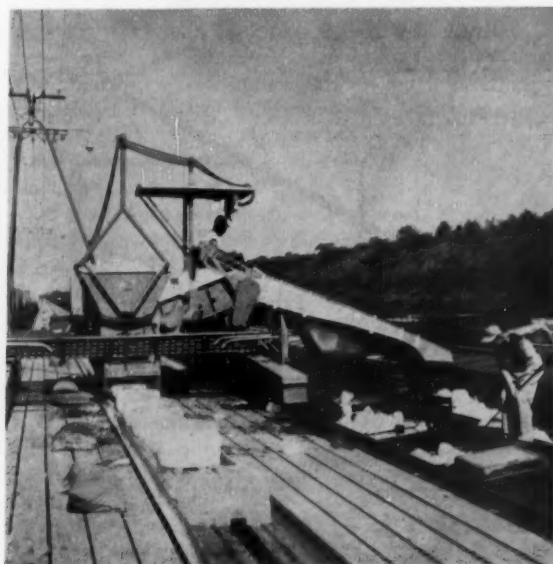
This method of supplying ice is only temporary; construction has already begun on an ice-manufacturing plant on a bluff just north of the present unloading dock. When the plant is completed, a system of conveyors will deliver the ice to the present overhead conveyor.

Plant capacity will be about 250 tons per day with a storage capacity of 1,000 tons.

On the upper deck of the platform, bunker icing is handled by two Preco automatic icing machines mounted on 50-lb rails spaced 12 ft apart. The machines are powered by electric motors operating from a 3-wire 440-volt overhead trolley system. The six-ton machines pick up the 300-lb cakes of ice which pass under them in a flat position on the platform conveyor. The units have a capacity of 40 300-lb cakes of ice per minute. They can grind the cakes into either 15- or 50-lb chunks as desired.

#### Operation of Ice Machines

Each machine is operated by one man who manipulates a series of controls which govern the travel of the unit along the rails at 4 mph, select ice size, position the delivery chutes over the car bunkers, and distribute the ice between the hatches as required. In addition a con-



**BUNKER ICING** is performed by two automatic ice machines which pick up ice cakes from conveyor, crush them to desired size and feed ice into car bunkers.



**COMMUNICATIONS** between foreman's office and ice machines is provided by two-way radio. Office can also contact platform personnel on talk-back speaker circuit.





***"Nobody knows de trouble I've seen"***

How many times has a glove like this on the hand of a maintenance worker gripped a wrench to repair a valve in your plant? How many of those times could have been avoided if the valves had been better ones from the start?

The big advantage of quality valves like Crane is in the performance they deliver *with less maintenance*. Just one repair job can, and often does, cost many times the difference in price between a "bargain" valve and a Crane quality valve.

So today as you seek ever more intently for ways to cut costs, look for the kind of valve dependability that cuts down your piping upkeep. Buy better for lower ultimate cost. That's *always* real thrift. It's the reason why so many Crane valves and fittings are going into service today.

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# CRANE

**VALVES • FITTINGS • PIPE • PLUMBING • HEATING**



## Quick Handling for Perishables



**YARD CREWS** make frequent use of talk-back speakers placed at intervals along each ladder track and at other strategic locations around yard area.

trol panel with a series of buttons is provided on each machine, which remotely controls the ice-conveyor system so as to regulate the supply of ice coming to the machine. Platform lighting is also remotely controlled from the operator's position on the machine. Both of these remote-control circuits are carried on a fourth wire attached to the overhead trolley and operate somewhat like a dial telephone system. For safety purposes, a "blue flag" system, by which the operator can remotely control a set of lights to warn engines not to couple into cars on the platform, is also to be installed.

In actual operation the machines work about 35 to 40 car lengths apart. Before the icing is to begin, about 300 cakes of ice are run under the first machine and into the space between the two machines to provide a supply of ice for the lead machine; after icing begins the rear machine picks up all of the ice delivered to it on the conveyor. Eight men comprise the total force required to place bunker ice with the machines.

Under present operating conditions, where ice is being hauled in and unloaded from reefer cars as it is being used, the machines are each able to bunker-ice a car in about one minute. However, after the ice plant goes into production it is expected that cars can be iced in an average of about 30 sec each. Some time is currently being lost because ice cannot be supplied to the machines fast enough to keep them in continuous, full-speed operation.

To be added soon are two power salt machines which will work in conjunction with the icing machines where salting is required. These machines were designed and are being built by PFE forces and will operate on the same track and use the same trolley system as the ice machines. Each machine will be operated by one man and will have a capacity of 10,000 lb of salt, which is considered sufficient for a full day's requirements.

Beneath the platform about midway between the ends a salt-storage bin with a capacity of 100,000 lb has been erected.

The hopper-bottomed bin is fitted with a horizontal conveyor inside which carries salt to openings in the bottom where it is dumped onto a bucket elevator for delivery to the upperdeck. The storage bin is refilled by a winch and scoop mechanism from a car spotted on either of the platform tracks adjacent to the bin.

On the lower platform, the ice cakes are pulled off the conveyor by hand and fed into Link-Belt retopping machines which crush the cakes and blow the shaved ice into the bodies of cars where retop icing is required. These machines are 440-volt portable units and can be plugged into electrical outlets located at 100-ft intervals along the platform.

### Communications on Ice Dock

A total of 49 wide-angle talk-back speakers are spaced around the platform area. Forty-five are mounted just beneath the floor of the upper deck at 100-ft intervals on platform piling. A cord extends down from a "push-to-talk" switch on each speaker for use of employees on the lower platform, while a cord arrangement extends upward for workers on the upper deck. Each of the speakers is connected on a paging circuit to the foreman's office in the headhouse. The other speaker units are placed at strategic locations on the ice unloading dock and on the overhead truss system and operate on the same paging circuit.

In addition to the talk-back speaker system, each ice machine is equipped with a Motorola two-way radio over which the foreman in the headhouse and each of the operators can communicate. The foreman uses the same console unit to talk by radio with the ice machines as he does to talk by wire over the talk-back paging system.

### Tower Controls Yard Operations

Overall operations at the Eighteenth Street yard are controlled from a 48-ft yardmaster's tower at the east end of the yard. The tower is of conventional UP design, square in plan and embodying a completely enclosed structure from the ground up. The lower section of the tower is constructed with reinforced concrete walls, while the upper section consists of prefabricated stainless steel siding mounted on a structural steel frame. A metal stairway inside provides access to the yardmaster's office in the upper section. The lower portion of the structure contains rooms where electrical and communications equipment is housed.

The yardmaster's office has a panoramic view afforded by tinted-glass windows surrounding the office. The

*(Continued on page 50)*

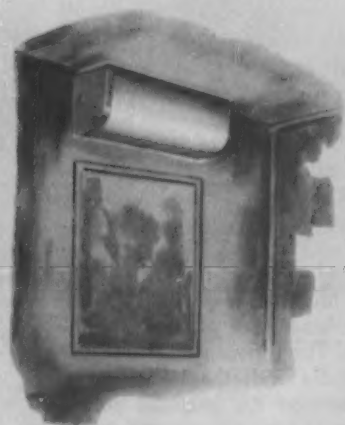
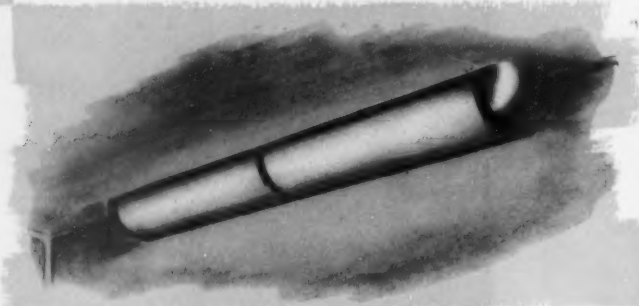


Lighting...by "Safety" has been developed to meet the most exacting illumination requirements and designed to blend with modern car interiors.

Note the decorative "Safety" lighting unit installed over the bar section and the "Safety" continuous side-wall units which provide a combination of both direct and indirect lighting.

FLUORESCENT COVE LIGHT... provides a new, distinctive yet utilitarian lighting medium for bedrooms and similar locations.

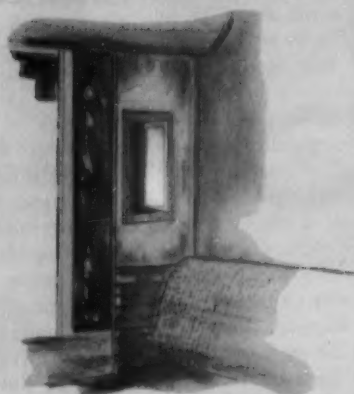
# LIGHTING by "Safety"



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... as used on 173 Budd built Canadian Pacific Cars ...

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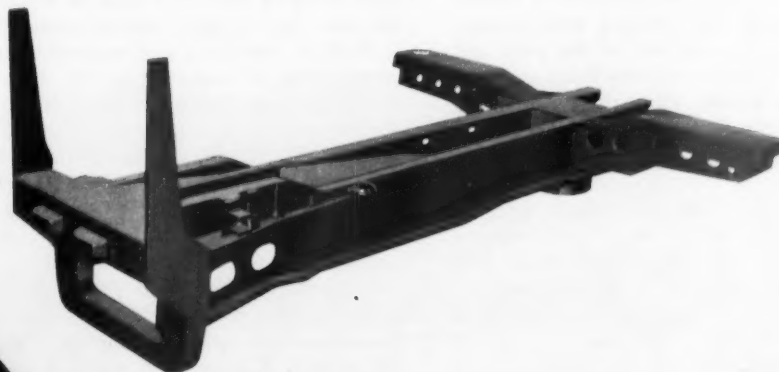


## YOUNGSTOWN STEEL CAR WELDMENTS

YOCAR



Just as Budd has developed the art of designing and building modern, up-to-the-minute streamlined trains, so has Yocar developed the technique of fabricating and welding modern, up-to-the-minute high strength steels. Budd and Yocar combine their skills in 173 stainless steel passenger cars for use on the Canadian Pacific. Yocar end underframe weldments assure a safe foundation for these luxury speedsters by Budd. Consult Yocar for your weldment requirements.



YOCAR

YOUNGSTOWN STEEL CAR CORPORATION

NILES 6, OHIO



## Quick Handling for Perishables

(Continued from page 47)

yardmaster sits at a communications console through which he can communicate with any of the 40 locations served by talk-back speakers around the yard area. He is able to talk to anyone of the locations individually or, if desired, he can use one of four groups of speakers for low-level paging. He also has 7 high-level speakers for general paging in the yard area.

### Four-Yard Radio Network

The console is also equipped with radio over which the yardmaster can talk with any of the 28 radio-equipped switch engines in the Kansas City area, as well as three supervisory automobiles, three other yard offices and the general yard office. All of the UP's yard radio in the Kansas City area is on the same frequency so each radio-equipped station can communicate with all the others. In addition to the Armstrong yard previously mentioned, the UP has two industrial yards, Quindaro and BOP, in the Fairfax Industrial District some distance away from the new yard. Switch engines in the Kansas City area are pooled among these four yards and, by having the single radio network, communication is possible with the engines regardless of where they are working.

The Eighteenth Street tower is also served by a pneumatic-tube system through which waybills and other information is transmitted from incoming trains at the west end of the yard. Another tube leads to a new general yard office building at Seventh street, about 1½ miles distant.

Lighting of the yard area is provided by six floodlight towers, three being located at strategic points at each end of the yard. Other facilities in the yard include an engine service track.

### CTC at Yard Entrance

The entrance to the yard from the double-track main line is about 1½ miles west of the yard. At this point trains are headed in on a running track through a series of crossovers with power switches and remote-controlled interlocking signals. With this long running track it is possible to head-in two average-length freight trains so as to clear the main line even though the yard is blocked so trains cannot enter. An independent switching lead running alongside this running track extends out about a mile from the west end of the yard and serves to accommodate long cuts of cars being switched to various yard tracks without interfering with movements coming off the main line.

The CTC installation at the west entrance to the yard is part of a new system in conjunction with the yard construction. The system covers about three miles of double track extending eastward from the west entrance of the new yard to a point where the UP tracks join those of the Kansas City Terminal. All switches and signals are operated from a control panel in an operator's station house at Kaw Junction, near the west end of the Eighteenth Street yard.

The site of the new yard was formerly a low swampy section through which a small creek flowed. A portion of the area was served by tracks on which stock cars were cleaned, but most was undeveloped. In constructing the yard it was necessary to build an earth fill, ranging from 2½ ft deep at the east end to about 8 ft at the west, in order to bring the tracks up to the desired elevation. Fill material, totaling about 325,000 cu yd, was obtained from a bluff which parallels the yard along the north side. Earth was excavated from the bluff, transported to the site and placed with Tournapull-scrapers and tractor-dozers.

In conjunction with the placing of the new fill, a complete drainage system consisting of Armco corrugated iron pipe was installed. It incorporates lateral drains running across the yard at 400-ft intervals into which drop inlets with cast-iron gratings carry surface drainage. The laterals empty into a main outfall line running along the north side of the yard. The outfall line carries the water into the creek which was diverted to skirt the yard and run beneath the tracks at the west end.

### How Trains Are Handled

In actual operation the yard works as follows: A train arriving from the west is headed in on the running track and moves down to the west end of the yard where switches have previously been lined to route it on one of the tracks adjacent to the icing platform. Since perishable cars are placed at the head ends of all trains the road engine pulls the train down to a point where the head reefer is spotted at the east end of the platform.

As soon as the train is stopped a yard engine couples to the rear end and pulls off the dead freight cars, which are moved to the switching lead in the south section of the yard. These cars are then switched to the correct tracks for transfer, city and hold shipments.

While the dead freight is being switched, the reefer cars at the platform are being iced. After the icing is completed, a yard engine working from either end moves the perishable cars to the north section of the yard where they are switched to the correct tracks for transfer to connecting lines, for delivery to local industries or for movement to a team track in the city.

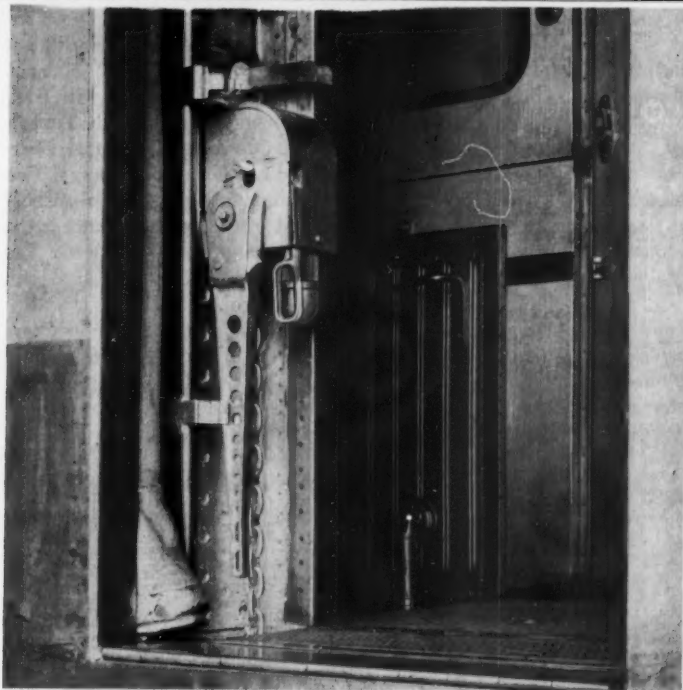
Deliveries of dead freight transfer cars are made to the connecting lines at intervals round-the-clock, while perishable transfers are delivered frequently during the early morning hours and must be delivered before 7:30 am each day to avoid missing connections.

With its new yard and supporting facilities the UP reports that its eastbound service through Kansas City has been greatly improved. About 16 freight trains from the west are being handled currently each day, and officers of the road state that the new facilities could handle at least 25 trains per day without difficulty.

The new yard project was carried out under the general direction of W. C. Perkins, chief engineer, and under the direct supervision of Ed Chalk, engineer of construction on the job. The work was performed jointly by company forces and several contractors. Terminal operations at Kansas City are under the general supervision of T. P. Argubright, terminal superintendent.



# 1904 PEACOCK BRAKES 1954



• PEACOCK No. 800-LE Brake shown in vestibule of new CPR car

*A Half Century*  
OF  
**HAND BRAKE  
PROGRESS**  
Contributes to  
**CPR's  
New Equipment**

1954 is our 50th Birthday—a significant milestone in a continuous program of research which has brought improved designs of PEACOCK Hand Brakes for passenger, diesel and freight equipment.

PEACOCK Brakes are recognized as the best for modern equipment. The Canadian Pacific is using PEACOCK No. 800-LE Brake on all 173 stainless steel cars now being built by The Budd Company.

## NATIONAL BRAKE CO.

30 Church St. New York 7, N. Y.

- One of the 173 new CPR cars, including 36 "scenic-domes" which will be equipped with PEACOCK BRAKES



## First Canadian Dome Cars

(Continued from page 37)

recordings, and a third is for the public-address system to be operated from three locations in the train when all of the equipment is delivered.

The full sleeping cars have speakers in each sleeping room and in the open-section area. The dome observation-lounge cars have a speaker in each bedroom, two in the beverage room, two in the observation-lounge, and one in the dome.

Selector switches and volume controls are available in each bedroom, in the open-section areas of the full sleeping cars, and in the beverage and observation-lounge rooms of the dome observation-lounge cars. Volume control, alone, is available in the dome.

A telephone set with a press-to-talk switch for operating the public address system is placed in a recess in the side of the car at the water cooler in the dome observation-lounge car. The public-address system automatically interrupts music for announcements in the public areas. In the sleeping rooms, announcements are received only when the selector switch is turned to PA.

The main items of equipment for the operation of the

music and public-address system will be housed in the dining cars when they are built. Space will be provided for the addition of radio equipment.

### Trucks and Brakes

The trucks are four-wheel Commonwealth type with 8-ft 6-in wheel base. Axles have 6-in by 11-in journals. Those on the non-dome sleeping cars are fitted with SKF roller bearings; those on the dome cars, with Timken roller bearings. The bolsters have 24-in Central Bearings with Thermoid pads and outside swing hangers. Two Houdaille vertical friction snubber type shock absorbers are attached, one at each end of the bolster. There is the usual installation of Fabreka sound-deadening pads. The trucks are equipped with Budd disk brakes and with Budd Rolokron wheel-slide control.

The air-brake equipment is HSC furnished by Canadian Westinghouse with D-22 AR control valves and A-2 quick-service valves. The non-dome sleepers have two Peacock lever-type hand brakes, one mounted on a collision post at each end of the car. There is only one hand brake on the dome sleeper.

All cars have Waughmat twin-cushion draft gears and AAR Type H tightlock couplers.

(Continued from page 27)

each, beginning September 1, 1955. They would be sold by competitive bidding, with interest rate to be determined by such bidding.

### Security Price Averages

	Sept. 21	Prev. Week	Last Year
Average price of 20 representative railway stocks	70.15	70.54	58.07
Average price of 20 representative railway bonds	96.55	96.25	89.33

### Dividends Declared

**BELT RR & STOCKYARDS.**—common, 50¢, quarterly; 6% preferred, 75¢, quarterly; both payable October 1 to holders of record September 20.

**CHICAGO GREAT WESTERN.**—5% preferred, 62½¢, quarterly, payable September 30 to holders of record September 25.

**EUROPEAN & NORTH AMERICAN.**—\$2.50 semi-annual, payable October 4 to holders of record September 10.

**MAHONING COAL.**—reduced, \$7.50, payable October 1 to holders of record September 24.

**NORWICH & WORCESTER.**—8% preferred, \$2, quarterly, payable October 1 to holders of record September 15.

**PITTSBURGH & LAKE ERIE.**—\$1.50, quarterly, payable October 15 to holders of record September 24.

**TEXAS & PACIFIC.**—common, \$1.25, quarterly; preferred, \$1.25, quarterly; both payable September 30 to holders of record September 24.

## Financial

### Alleghany Moves to Keep Carrier Status

Alleghany Corporation's desire to retain its carrier status came formally before the Interstate Commerce Commission last week.

The presentation was in answer to

the commission's order of June 22, which called upon Alleghany to show cause why it should not slough off carrier status, since it had divested itself of control of the Chesapeake & Ohio in preparation for Robert R. Young's fight for control of the New York Central. It followed an earlier response to the order, in which Alleghany revealed the extent of its interests in Central (*Railway Age*, July 19, page 14).

Specifically asking that its carrier status be maintained, Alleghany last week joined in an application for authority to merge the Louisville & Jeffersonville Bridge & Railway into the Cleveland, Cincinnati, Chicago & St. Louis, a Central subsidiary. The Central and the "Big Four" were other parties to the application.

By it, control of the L&JB would go to the Central through its control of the "Big Four" and, the application contends, pass to Alleghany through its control of the Central. The "Big Four" owns all the stock of the L&JB, the application states.

This situation, the application claims, parallels that under which Alleghany originally obtained its carrier status through having control of the C&O under an ICC decision of June 5, 1945. It that case, C&O acquired the property of a subsidiary, Norfolk Terminal & Transportation Co. (*Railway Age*, June 16, 1945, page 1072).

The application states: (1) That Alleghany intends to increase its holding of NYC and other railroad securities and, at the same time, decrease its holdings in companies not under ICC jurisdiction; and (2) that Alleghany has an "undivided half-interest"

in 600,000 Central shares with voting rights under joint venture agreements. If Alleghany loses its carrier status it would no longer be under ICC jurisdiction, but would be regulated by the Securities & Exchange Commission.

## Railway Officers

### BELT RAILWAY OF CHICAGO.

—E. C. Harvey, assistant superintendent, has been promoted to superintendent, to succeed D. J. Clifford, who retired September 1.

Vernon L. Smith has been appointed superintendent motive power at Chicago, succeeding L. J. Brasher, who has resigned to accept a position with another company.

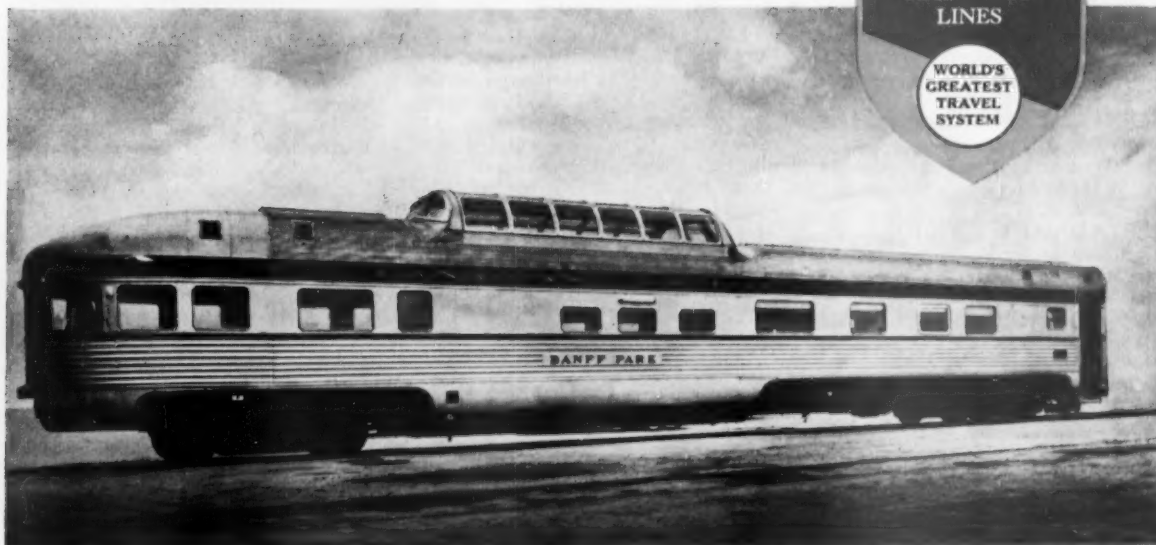
**BURLINGTON.**—V. W. Mitchell, district storekeeper at Sheridan, Wyo., has extended his duties in that capacity to Alliance, Neb., where he succeeds H. O. Condit, retired. Mr. Mitchell's new headquarters will be located at Alliance.

Richard G. Johnson, assistant superintendent at Creston, Iowa, has been transferred to Chicago, while Irl W. Crist, trainmaster at Ottumwa, Iowa, succeeds him.

**CANADIAN PACIFIC.**—M. A. Roach, assistant superintendent at Souris, Man., has exchanged positions with V. H. Conn, assistant superintendent at Regina, Sask. W. R. McCracken, assistant superintendent at Medicine Hat, Alta., has been trans-

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DOUBLE-ACTING

*Twin Cushions*

TRADE MARK

The first Waughmats ever used on this continent were applied to Canadian Pacific passenger cars in 1930 . . . twenty-four years ago. The Waughmats are still in regular service. In the light of this long experience, it is evident that the selection of Waughmat Twin Cushions by the Canadian Pacific Railway for their 173 new stainless steel passenger cars was no casual choice. Performance established preference. Inquiries invited.

## WAUGH EQUIPMENT COMPANY

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CHICAGO — ST. LOUIS — CANADIAN WAUGH EQUIPMENT COMPANY, MONTREAL



ferred to Calgary. **A. W. Grassie**, assistant superintendent at Wilkie, Sask., succeeds Mr. McCracken at Medicine Hat. **J. G. Benedetti**, assistant to general superintendent, Alberta district, has been appointed assistant superintendent, with headquarters as before at Calgary, succeeding **J. C. Brigham**, who has been transferred to Wilkie. **John Flintoft**, operating assistant at Winnipeg, succeeds Mr. Benedetti at Calgary.

**G. P. Beach**, assistant division engineer at Calgary, has been named division engineer at Brandon, Man., succeeding **W. A. Smith**, who has been transferred to Vancouver, B.C. Mr. Smith replaces **R. A. Swanson**, who has been promoted to assistant district engineer at Calgary.

**CENTRAL OF GEORGIA.**—**W. C. Hurst, Jr.**, has been appointed general agent at Cincinnati, succeeding **A. O. Frederman**, promoted.

**CHESAPEAKE & OHIO.**—The jurisdiction of **R. M. Wiley**, superintendent of terminals at Walbridge, Ohio, has been extended over all operations in Toledo terminal, including Ottawa yard. **G. E. Kleykamp**, assistant superintendent at Ashland, Ky., has been transferred to Richmond, Va., succeeding **C. H. Manning**, who replaces Mr. Kleykamp at Ashland.

**DETROIT, TOLEDO & IRONTON.**—**H. J. Oliver**, assistant superintendent motive power (car) at Dearborn, Mich., has been appointed superintendent motive power and equipment at that point, succeeding **R. W. Wilber**, who retires October 1, after more than 33 years of service.

**JERSEY CENTRAL.**—**Nathan W. James**, assistant director of public relations, has been appointed director of publicity, succeeding **R. L. Barbour**, whose appointment as director of public relations of the New Haven was reported in *Railway Age* August 30.

**LEHIGH VALLEY.**—**George T. McCleary**, manager—transportation at New York, retires from active service October 1. **Charles A. Kling**, assistant to manager—transportation, will assume Mr. McCleary's duties, with the title of superintendent—transportation. **John A. Rafferty** has been named assistant to superintendent—transportation.

**NEW YORK, ONTARIO & WESTERN.**—**Sherwood L. Hamilton** has been appointed traffic manager at New York, succeeding **William F. Vail**, whose death was reported in *Railway Age* August 30.

**NICKEL PLATE.**—**Kenneth C. Tiffany** has been appointed general

agent, passenger department, St. Louis, succeeding **E. D. Burnett**, deceased. **William H. James** succeeds Mr. Tiffany as general agent, passenger department, Fort Wayne, Ind.

**PENNSYLVANIA.**—**A. M. Schofield**, assistant division engineer at Williamport, Pa., has been advanced to division engineer at Chicago, succeeding **W. P. Conklin**.

**Thomas N. Frazell**, assistant accounting supervisor at Chicago, retires October 1 after more than 51 years of service.

**G. R. Wallace, Jr.**, has been appointed district freight agent at St. Louis.

**SOO LINE.**—**Harold J. McKenna**, assistant freight traffic manager—rates, has been promoted to freight traffic manager—rates and divisions at Minneapolis, succeeding **George K. Reid**, who retired September 1. Named as assistant freight traffic manager at Chicago is **Kenneth J. Sherwood**, general freight agent there. **George B. Shimek**, general agent, has been appointed assistant general freight agent at Minneapolis, replacing **E. J. Murphy**, retired. Mr. Shimek's successor is **Stuart Rogers**, commercial agent at Philadelphia.

**TEXAS & PACIFIC.**—**J. L. Perkins**, assistant superintendent of shops at Marshall, Tex., has been advanced to superintendent of shops at that point to succeed **G. A. Weber**, who retired September 1. The position of assistant superintendent of shops has been abolished. **T. E. Albright**, division superintendent at Alexandria, La., has been appointed mechanical superintendent at Dallas, Tex., succeeding **W. F. Kaseal**, who has resigned to become chief mechanical officer of the New York Central at New York. Replacing Mr. Albright is **J. G. Tucker**, assistant superintendent at Big Spring, Tex., while **A. C. LaCroix**, also assistant superintendent at Big Spring, has been given jurisdiction over the territory previously assigned to Mr. Tucker. **J. A. Wright**, trainmaster at that point, succeeds Mr. LaCroix, while **G. W. Stone** replaces Mr. Wright.

**WABASH.**—**E. E. Sanford**, assistant general superintendent motive power at Decatur, Ill., and **C. W. Graham**, superintendent car department there, recently retired after 48 years of railroad service each.

## OBITUARY

**William H. Claus**, assistant signal engineer of the *Illinois Central*, died September 14 at *Illinois Central Hospital* in Chicago.

**Samuel Hammer**, general manager of the *Gulf Coast Lines* and the *International-Great Northern*, died September 9 at Laredo, Tex.

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with minimum  
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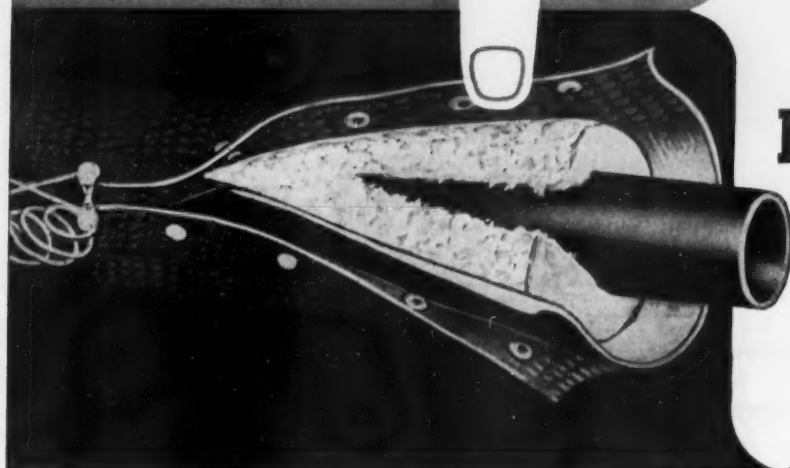


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- Remains snug and firm against the pipe.
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the demands of the modern railroad traveler . . . made by Angelo Colonna.

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designers and manufacturers food service equipment  
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Operating man, age 44, with  
large Eastern Railway Company,  
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5—65 ton H. K. Porter Diesel  
electric locomotives. 400 HP.  
General Electric and Cum-  
mins equipment. Completely  
reconditioned.

10—Koppel and Western 30 cu.  
yd. Air Dump Cars. Lift  
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All Steel. Bargain.

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**Canadian Pacific's new passenger fleet features  
colorful, carefree MICARTA surfaces in all interiors**

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MICARTA was chosen because it offers the perfect blend of beauty and utility. Its tough, mirror-smooth surface will stand up to the abuse of

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This progressive step in car design promises the railroad industry more attractive and functional car interiors at a substantial savings in upkeep costs—savings that will quickly repay the initial cost of this durable plastic surfacing material.

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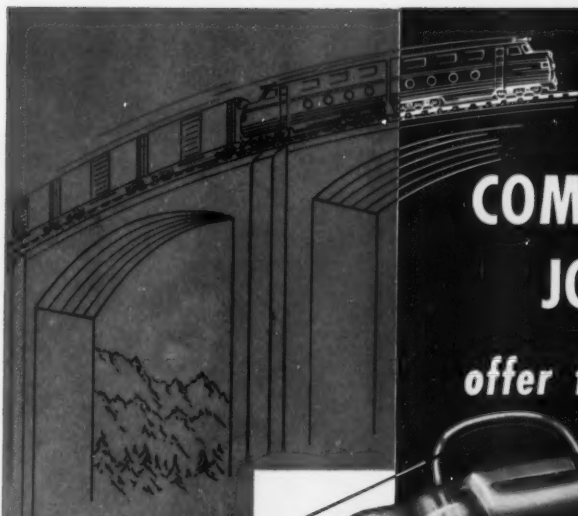
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**BARs**—carbon & alloy, hot rolled & cold finished  
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# COMPOSITE ARTICULATED JOURNAL BOX LIDS

offer these Outstanding Features:

## HAIRPIN

Temporary means of holding the spring in position for application of lid to Journal Box.

## PIN

Finished steel, retained by flanges on housing. No auxiliary means required.

## BRIDGE

Connects Housing and Cover. Securely welded in place.

## BALL AND SOCKET JOINT

Full articulation enables lid to adjust itself to variations of Hinge leg hole or Box face.

## ROLLER

Reduces wear and provides easy lid operation.

## SPRING

Torsion type, enclosed. Assures tight assembly with lid closed or open.

## HOUSING

MALLEABLE IRON CASTING with ample hinge pin bearing area.

## COVER

Reinforced pressing, flanged four sides. Provides rigidity and tight fit against journal box face.



Easy to apply...  
No Tools Required

1

Place in horizontal position over Hinge Lug

2

Insert Pin

3

Partially close lid until hairpin is free. Then remove hairpin and close lid all the way. If necessary to remove lid, open to position (3) to insert hairpin, lift to position (2) to remove hinge pin, and lift off lid.

HAIRPIN



WRITE FOR BULLETIN J-309

A.A.R. CERTIFICATES 1, 5, 11 & 43, SPEC. M-120-51

# THE SYMINGTON-GOULD CORPORATION

Works: DEPEW, NEW YORK

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## Canadian Pacific's 84 new coaches, dome cars and diners roll on TIMKEN® bearings

AS part of its \$40,000,000 improvement program the Canadian Pacific Railway is putting into service 84 new stainless steel coaches, dome cars and diners. All will be modern cars equipped with Timken® tapered roller bearings to eliminate the expensive hot box problem—cut operating and maintenance costs.

Because of their tapered design, Timken bearings are the only journal bearings that deliver what you expect when you buy a roller bearing. They're the only bearings you can count on to end the hot box problem and cut operating and maintenance costs to a minimum.

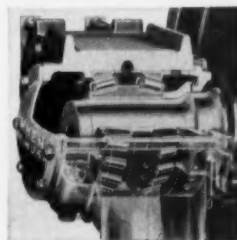
Because of their taper, there's no lateral movement in Timken bearings. No lateral movement to score rollers and races, shorten bearing life. No lateral movement to pump lubricant through the seal and out of the journal box, draw dirt and water in.

Because of their taper, Timken bearings have positive roller alignment. Ends of rollers are held snug against the rib and their wide area contact keeps rollers properly aligned. The rollers can't skew to upset full line




contact. The load is always carried the full length of the rollers.



With passenger trains on roller bearings, the next great step in railroading will be converting freight trains to roller bearings, too. And this step is a lot nearer now because a new Timken heavy-duty bearing assembly cuts the cost of applying roller bearings to freight cars 18% to 25%. This new bearing assembly fits all types of side frames and comes pre-assembled and pre-greased. Complete information is yours for the asking.

Make sure you get all that a roller bearing can give you. Get Timken tapered roller bearings. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable: "TIMROSCO".



**TIMKEN**  
TRADE-MARK REG. U. S. PAT. OFF.  
**TAPERED ROLLER BEARINGS**

NOT JUST A BALL  NOT JUST A ROLLER  THE TIMKEN TAPERED ROLLER 

BEARING TAKES RADIAL  AND THRUST  LOADS OR ANY COMBINATION 